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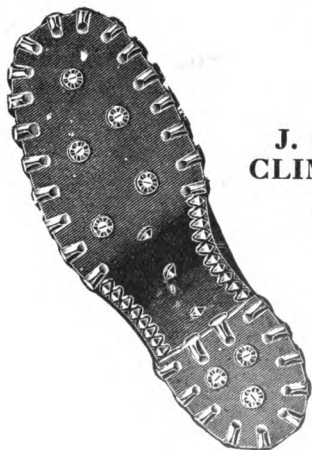
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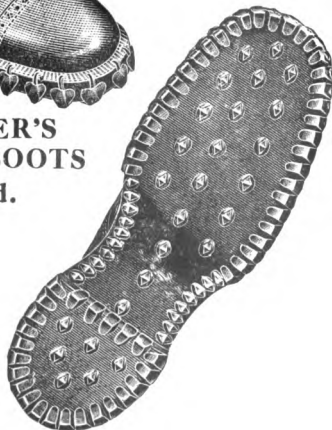
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(Absent) General Bruce, Hingston, Hazard, Noel.

THE
ALPINE JOURNAL.

NOVEMBER 1924.

(No. 229.)

HIS MAJESTY THE KING

TO

SIR FRANCIS YOUNGHUSBAND

‘THE KING is greatly distressed to hear the sad news of the death of Mr. Mallory and Mr. Irvine, who lost their lives in making a final attempt to reach the summit of Mount Everest.

‘His Majesty asks whether you will be good enough to convey to the families of these two gallant explorers as well as to the Mount Everest Committee an expression of his sincere sympathy.

‘They will ever be remembered as fine examples of mountaineers—ready to risk their lives for their companions and to face dangers on behalf of science and discovery.’

THE MOUNT EVEREST DISPATCHES.

[We print below Colonel Norton's Dispatches, from the arrival of the Expedition in the Rongbuk Valley to its withdrawal after the loss of two of its members. They tell in vivid language a tale of devotion and of self-sacrificing team-work such as we knew our men would exhibit.]

COLONEL NORTON'S DISPATCHES.

No. 6.

Base Camp, Rongbuk. *May 13.*
[Published *May 31.*]

WHEN I last wrote hence on April 29 things had gone so smoothly that we were wondering when the crash was coming. We had reached the Base Camp exactly according to plan and, amply provided as we were with local labour, the way seemed clear before us to a possible assault on the mountain somewhere about May 17. Portraits of the gods guarding Everest are painted on the walls of the Rongbuk Monastery. We studied them with interest and smiled.

The first task, after Camp II. had been established and stocked by local labour with all stores for the higher camps, was to transport the necessary proportion to Camp III. with our own specially enlisted porters. On May 3 Mallory, Noel, Odell, Hazard, and Irvine started for Camp III., accompanied by twenty of these porters. On the following day Havildar Umar, 6th Gurkhas, followed with twenty more porters. These two parties were to complete the establishment of Camp III., close under the glittering wall of the North Col, with all stores required for itself and the higher camps, and then to proceed with stocking Camp IV. on the North Col itself, as soon as the snow and ice staircase to that point had been reconnoitred and constructed by Odell and Hazard. A reserve of twelve porters, including some of the toughest veterans of two years ago, was maintained for the moment at the base, under Geoffrey Bruce. Somervell, Beetham, and I left the Base Camp on May 6. It was a very clear, cold morning, after a night when the temperature at the Base Camp fell to *minus 10° F.* We arrived without incident at Camp II. on the morrow, finding Noel there. The same evening it began to be clear that all was far from well. A party of porters based on Camp II.

had made two trips towards III., but encountered such low temperatures, combined with head winds, that Mallory decided to establish a dump for stores at a point on the glacier about a mile short of the camp.

But who are these weary, crippled men coming staggering and straggling through the séracs of the glacier into Camp II., between 4 and 6 p.m., from the direction of III., looking for all the world like the stragglers of the British Army I once saw blocking the roads south of Le Cateau on August 27, 1914? It appears that they are porters of the first party from Camp III. They have made one 'carry' to that camp two days ago, and are now clean driven out by exposure and exhaustion after spending forty-eight hours practically confined to the tents, with only bare necessities in the shape of food and clothing—in other words, a blanket apiece and the local barley meal to eat. The ample and varied supplies of food and spare blankets and most of the fuel are still dumped on the glacier a mile short of their camp. As at St. Quentin, Chauny, and Noyon in 1914, there is now no time to count the cost nor look far ahead. The stores dumped at II. for all the higher camps must be ruthlessly broken up and expended. The high-altitude tents are pitched, the priceless stores of Meta solidified spirit are broached, high-altitude sleeping-bags are issued. The capacity of Camp II. is doubled for the night and some degree of comfort is extended to the sufferers.

On the morrow Mallory arrived at breakfast from Camp III., and we held a council of war. Mallory's story was short and sweet. Temperatures as much as *minus* 22° F., 10° lower than anything met in 1922, coupled with terrible wind and the failure of the majority of stores from II. to reach Camp III., explain the rout of the first party. Mallory himself ordered the retreat, and had practically to man-handle many men out of the tents on to their feet, so completely had the hardships taken the heart out of them. Such weather conditions surely must be exceptional, and it was decided to rest and recuperate the first party at Camp II., and next day to send the second party from Camp II. without loads to the Glacier dump, thence to carry all essentials up to Camp III., where they were to remain, changing places with the first party. The situation was explained to the men, and the second party went off on their third trip in four days in good heart, under Somervell's escort.

Geoffrey Bruce now arrived at Camp II. with the Old Guard, affording neither the first nor the last instance in history

when the commander blessed his reserve. This day Odell and Hazard attempted to reconnoitre the route to North Col, but the conditions were such as precluded their reaching more than half-way, making a dump of rope pickets. The next day Mallory, Geoffrey Bruce, and I left for III. with a convoy, very much more cheerful than the first party, and a reserve carrying stores partly to the dump and partly through to Camp III. Hazard, who was sent to the base to relieve Shebbeare, met us *en route*. I have a sharp silhouette of him in mind as I write, making famous going down the glassy surface of the glacier in the teeth of the gale, with his beard and moustache iced, so that he looked like Father Christmas. Shebbeare's special qualifications as transport officer now called for his presence at Camp II., where it was hoped under more favourable conditions to dispense with an officer.

Now began a blizzard lasting continuously for forty-eight hours. Strictly speaking, it only snowed for perhaps twenty-four hours, but the conditions subsequently were identical, or worse. The wind increased after the snow ceased to fall, driving the fresh-fallen powdery snow before it in incessant gusts, producing much the same results as if snow were falling, combined with a lower temperature. All woke at Camp III. on the morning of the 10th to find the tents filled with inches of powdery snow. It was now apparent that it was inadvisable to maintain more sahibs than were necessary under such conditions at Camp III. The carriage of provisions and consideration of the condition of those climbers destined for an early attempt outweighed the acclimatisation question and decided Mallory and Irvine to return to Camp II., which they did after breakfast. Somervell and I escorted a party from Camp III. back to the dump, and returned well laden in the teeth of driving snow, while Geoffrey Bruce stimulated the reluctant camp into activity, and did what could be done under impossible conditions to evolve order out of chaos and comfort out of misery.

The night of the 10th-11th served the purpose, perhaps, of testing the wind resistance of our apparently flimsy high-altitude tents; for all other purposes it is best forgotten. The wind appeared to be shot high in the air over the North Col, Rapiu-La, and Lhakpa-La, the three passes surrounding us, and, from some point high in the zenith, descended on the camp like a terrier on a rat-pit, and shook our little tents like rats. The minimum temperature was *minus* 7°, and the tents were again filled with drifted snow. At 9 A.M. on

the 11th the temperature was still *minus* 1°, a gale was raging, and everything was deep in snow. The North Col route would in no circumstances be safe for some days. The much-enduring second party of porters were now reduced nearly to the condition which the first party had reached three days before.

There was nothing for it but retreat—retreat to the Base Camp for a few days' recuperation before making a fresh start. Messengers were dispatched to Camp II. with instructions to evacuate it in hopes that they would reach there in time to stop any upward convoy. Then Geoffrey Bruce did a fine bit of work, though it was very much in the ordinary day's work for him. Taking up a commanding position in the centre of the camp in the teeth of the gale, he proceeded to order the striking and packing of the camp, for it was impossible to risk standing or even collapsed tents in such weather. How he got the men to work, the tents struck and packed in bags and boxes, bedding, stores, and fuel all neatly dumped, only he can tell. Perhaps his stinging words cut more than the wind, but it is on record that he found time and opportunity to give exactly the right amount of sympathy to the really sick and to those who thought they were more sick than they were. Such loads as were to accompany our downward course were fairly and justly apportioned, and to his credit, be it said, a comparatively cheerful party thankfully turned their backs on what had an hour ago been Camp III., and which was now something resembling a neat pile of stones.

Half-way down that weird corridor, with blue ice pinnacles, resembling nothing so much as a transformation scene at Drury Lane, which forms the lower road from Camp II. to Camp III., we met the convoy for Camp III., our note having arrived too late to stop it. Never mind, they can go right through to the base next day. Our convoy goes through to Camp I., with Mallory, Noel, Irvine, and Beetham in charge, and Somervell and Odell as far as Camp II. Geoffrey Bruce and I spend the night at Camp II. to look after and escort on the morrow a man who had broken a small bone in his leg on the glacier. So by 2 P.M. on the 12th the whole expedition was again at the base. And what a different base from that which we thought so bleak a fortnight ago! Bleak it still is, with no sign of the stir of the Tibetan spring in scanty vegetation and grey moraine heaps, but a garden of roses after III.

The end of Round One finds us discomfited, but very far from defeated. A hitch, but by no means the crash we feared, has

come. We have one man with seriously frostbitten feet, one with a broken leg, and two severe cases of bronchitis, and, worst of all, Lancenaik Shamsherpun, of the 6th Gurkhas, suffering apparently from hæmorrhage of the brain and in a serious condition. We lose inevitably five or six days of the original programme. On the other hand, when we reoccupy Camp III. in three or four days, we shall have no need to look over our shoulders. Everything will be up and the proportion of stores to go up higher will be a fleabite compared with what has been done. Porters and sahibs are acclimatised and tested up to 21,000 ft. We know our good carriers. Already, twenty-four hours after arrival at the Base Camp, the porters have got over most of their minor ailments and fatigues, and are showing normal cheerful faces. We hope to get them and the expedition as a whole blessed two days hence by the Head Lama at Rongbuk Monastery, who was too sick to do this when we passed through Rongbuk.

The British members of the Expedition are in perfect health, despite their roughish experience. Give us but the weather encountered in 1922 and nothing will prevent the smooth continuance of the plan, with ample time to carry it out. The brightest spot on our arrival at the base was to find that Hingston had rejoined, after leaving General Bruce at Darjeeling, in the nick of time to relieve Somervell of some of the arduous duties of medical officer.

Since writing the above I have to record with the greatest regret the death of Shamsherpun, painlessly, and without recovering consciousness. The death of this splendid young man in the prime of youth is much felt by all the members of the Expedition, who, in tendering their sympathies with his relatives and the regiment, feel that they have lost a friend and a most loyal assistant.

No. 7.

Camp I. East Rongbuk Glacier. *May 26.*
[Published *June 16.*]

‘No game was ever worth a rap for a rational man to play into which no accident, no mishap, could possibly find a way.’ This sentiment must be our consolation as I start the seventh dispatch from the Everest Expedition, for since I last wrote we have done little but provide Everest with games worth raps enduring [? message mutilated]. The task of describing our doings in detail I am leaving to the ready pen of Mallory, confining myself to a brief epitome of the events which led to our

finding ourselves once more temporarily defeated and strung out in echelon between the Base Camp and Camp II. for two or three days' recuperation from the rigours of Camps III. and IV.

We advanced for the second time to the attack on May 17, the day originally planned for the first assault on the summit. As luck would have it, this was, perhaps, the most perfect day I have ever seen on the mountain, certainly the only day of the sort seen this year. We arrived on May 19 at Camp III., and on the 20th a party consisting of Mallory, Odell, and myself established a route to the site of Camp IV. and on to the North Col itself.

On the 21st twelve porters, escorted by Somervell, Hazard, and Irvine, established a camp on the old site. Incidentally, no sign could be found of the old camp established there in 1922. All was buried deep under the snows of two winters and two monsoons. Somervell and Irvine returned to Camp III., leaving Hazard in charge of the twelve porters, pitching camp in a snowstorm at 5 P.M.

On the 22nd a similar party under Odell and Geoffrey Bruce were to have repeated the trip, but as snow had started falling at 1 P.M. on the previous day and continued unintermittingly for twenty-six hours, the attempt was impossible. The night of May 22-23 produced the lowest temperature recorded by the Everest Expedition, viz. 56° of frost. Many of the party at Camp III., which now included five climbers, did not sleep. The eiderdown sleeping-bag is a wonderful invention, but it has its limitations. Emboldened by the low temperature, the brilliant morning, and other reassuring indications, and urged on by the consideration that priceless days were slipping past, a party of sixteen porters, under Bruce and Odell, left on the morrow for Camp IV. Half-way up the steep snow and ice slopes the party encountered such dangerous conditions underfoot, aggravated by the fact that it began to snow hard again, that the attempt had to be abandoned, and the party returned to Camp III., dumping their loads at the highest point reached by the porters.

From there they saw Hazard descending through the snowstorm above them, escorting what it was hoped would be his whole party. At about 5 P.M. the party arrived, Hazard having rightly judged that there was nothing for it but evacuation. He had shepherded the party safely down the unpleasant descent, but most unfortunately, while he was in the post of danger ahead, going first to test the treacherous new snow, the last four men lost their nerve and turned back to Camp IV.,

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where they remained marooned, their food supply, it turned out, confined to a sack of barley meal, as, two days before, a complete load of mixed luxuries had been accidentally dropped over an ice cliff by the porter who had been carrying it.

Here was a pleasant situation. The snow continued to fall until midnight, increasing in volume, and, what was worse, in softness. In fact, the indications were multiplying that some form of monsoon current was undoubtedly upon us. Yet the four unfortunate marooned men had to be extricated, and that without another day's delay. One man had already been reported frostbitten, and it was impossible to say if he would be fit to descend even on the next day. The whole party in Camp III. were in none too fit condition. Five days of alternate heavy climbing and lying snowbound in 16-lb. tents and five nights with temperatures averaging 50° of frost had played havoc with the health of all, British and Himalayan, and to some extent also with the *moral* of the latter, many of whom were shaken.

The route to the North Col would obviously be unsafe for some days to come. Meanwhile our stores of food and fuel—the former replaceable from below, the latter irreplaceable—were being consumed at an alarming rate. There was nothing for it but once again to withdraw to the lower camps, where sleep and some degree of comfort could be obtained and where the usual yak dung could be burnt instead of artificial fuel. Accordingly a twofold operation was carried out on the 24th—the evacuation of Camp III. and the rescue of the marooned men from Camp IV. Of this Mallory will tell the story. That he was himself suffering from the prevalent high-altitude cough—which prevents sleep at nights and handicaps the climber—and yet was the mainspring of two fine climbs, he will probably not tell, but few would, or could, have done what he did.

Hence, to-day finds us echeloned up the East Rongbuk Glacier, ready to repeat our attempts on the mountain with but a day's delay when the weather permits. Once more the *via dolorosa*, threading the moraines of the glacier, has witnessed a melancholy little procession of sick, frostbitten, and snow-blind men painfully wending their way to the comparative comfort of the Base Camp, where there are adequate medical arrangements. At Camp I. we are occupied in recasting our plans. If the monsoon is really on us—and who ever anticipated the beginning of the monsoon as early as May 19?—our only hope is largely to modify our plan and snatch fleeting chance in some fine interval. If it is only the preliminary current, to be followed even now by

a real spell of the fine weather we have looked for in vain, we must be prepared to take advantage of it. But we have our warning. Prudence must recognise the third alternative, which, however, I prefer not to discuss. Here I let Mallory take up the story.

MR. MALLORY'S STORY.

' This pause in our protracted struggle does not seem the moment for telling a story ; Norton probably thinks so, as he hands over this part of his task to me. Action is only suspended before the more intense action of the climax. The issue will shortly be decided. The third time we walk up East Rongbuk Glacier will be the last, for better or worse. We have counted our wounded and know, roughly, how much to strike off the strength of our little army as we plan the next act of battle.

' In making plans, however, though we turn from the story of the past to the brighter future, we have been brought to consider certain events of the past few days. The events all belong to one stage—between Camp III., 21,000 ft. up, and Camp IV., 23,000 ft. up, and still 6000 ft. short of the summit. In 1922 the way here consisted of a brief hour's easy going up the stones of the glacier, followed by a steeper ascent of about 1400 ft. on snow and ice slopes, and up and down these slopes the men went freely, without thought of the difficulties, until the party of seventeen were swept off them by an avalanche and seven porters were killed. That was on June 7, after the first big snowfall of the monsoon on June 3-5. Naturally now in 1924 we do not mean to be caught in the same way again, not if we can help it.

' It is when we think and think how we can make safe the way to Camp IV. up on the snowy shelf among the great ice-cliffs of Chang-La that we begin to appreciate the immense difficulties Everest holds in store. It must be remembered, in the first place, that our great ally, the Sherpa porter, is not a practised mountaineer. Give him good hard snow where nails can grip, slopes where he can just walk comfortably on good steps carved by the sahib's ice-axe clean and clear, unencumbered by fresh powdery snow ; give him a rope for a handrail here and there at danger points ; give him, above all, to believe that at the journey's end he will find good food and a warm bed, and he will go up and down steep tracks without a qualm, happy, confident, and safe.

' But the mountain does not always acquiesce in this cheerful view. The first weapon of defence is simply the cold. It seems cold beyond a certain point somewhere about — 10° F. at night.

The cold at these altitudes and under these conditions, whether in camp or on the mountain, tends to cause the expansive Sherpa's nature to contract. It is not surprising, when the hard conditions of their life are considered, that the porters, with few exceptions, lose their vitality most quickly in great cold. Nor can it be said that the British sahib is unaffected.

'The second weapon is the snow. The fewest inches of snow enormously increase the labour of carrying a load from Camp III. to Camp IV. All that was firm and sure becomes slippery and uncertain. The porter no longer distinguishes clearly the hole where his foot may be placed in the new snow, and is inclined to slide on the hard old snow or on the ice beneath as the powdery stuff blows up into his face. Instead of stepping in glad confidence, body erect, he begins hesitatingly to crawl, with his body hugging the slope. All sense of security is gone; the splendid fellow who bore his load so proudly has become a veritable child, a child for whom the British officer is at every turn responsible.

'The fortune of this Expedition in 1924 is sharply differentiated from our experiences in 1922 by the greater cold this year, and the greater snowfall to date. It is, of course, the snowfall which has chiefly affected the mountaineering difficulties between Camps III. and IV. The particular slope of the corridor where the avalanche occurred in 1922 is not dangerous every day, and was in perfectly good condition when Norton, Odell, and myself set forth to reach Chang-La on the 20th. Nevertheless, warnings of bad weather already received convinced us that we must establish at the outset a way independent of this slope in case of heavy snow.

'The rules of this game, so to speak, are that you may directly ascend a slope in comparative safety, but must never cross a slope, where the snow is likely to slip just by crossing it, and breaking the surface, since you are likely to start an avalanche. The corridor in 1922 was unsafe after the monsoon snow had fallen because the floor was on a slant, so that, though one might feel that one was going directly up a slope, one was really crossing one all the time. Now, as one looks up at the intermingled masses of white broken snow and bluish broken ice below the long snow-saddle called Chang-La, or North Col, it is almost unimaginable, if one does not take the corridor leading directly to the strategical point, that it will be possible to regain this line and reach this point without crossing one or other of the snow-slopes, all of which are dangerous to cross after sufficient snowfall.

' Away to the right, separated from the corridor by a series of ice-cliffs, we saw the long slopes used for the ascent by the first 1921 Expedition. The place has changed a good deal since, but the lower slopes remain substantially as they were, while higher an immense crevasse curves across the face and stretches to the upper end of the corridor. Would it be possible to use this crevasse if we came up to the right to take us back to the head of the corridor? Clearly on the lower lip, if we could work along, we should be protected from an avalanche from above. Any party making fresh tracks up to Chang-La from Camp III. will find they have a full day's work, though on the 20th we had favourable conditions and went slowly enough.

' At length the steep slope brought us to the crevasse and the one real difficulty of the route. On the lower lip, which we wanted to follow, impinged hereabouts a line of ice-cliffs. It was necessary to climb up the steep wall to the foot of the little chimney which here represented our crevasse. The snow in the bed of this chimney gave no foothold; steps could not be cut in its sides, so inconveniently narrow it was. Before we emerged and found ourselves on the big crevasse proper, with the lip fortunately accessible, we had climbed 200 ft. as steep and difficult as one could wish to find on any big mountain.

' The rest of the way gave no trouble, though taking the straight way in order to avoid traversing the final slope up to the old site of Camp IV. involved more step-cutting. We congratulated ourselves on having shared the labours of the day, so each could feel satisfied at his part and also at having eliminated the principal dangers on the way up. But it remained to be seen how the porters would manage the loads up that steep 200 ft.

' On the following day, the 21st, Somervell, Irvine, and Hazard set forth to escort the first lot of loads to Camp IV. It was snowing slightly when they started, and the day grew worse. Somervell found our tracks covered or could not find them at all. The ice chimney no doubt they rightly decided was too narrow for the majority of the loads. Somervell and Irvine established themselves at the top while Hazard directed operations from below, and all twelve loads were hauled up. Tremendous efforts must have been required of those two who hauled and the two or three porters who helped. Two hours and a half were thus spent. Having seen Hazard up to the foot of the final slope, Somervell and Irvine returned. According to plan the porters were to rest next day at Camp IV. before going on with Bruce and Odell to establish Camp V. This operation

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has to be conducted with oxygen. Irvine was now wanted in camp to prepare the apparatus for the next day. In such thick weather Somervell judged that Irvine must have a companion on the descent.

'A further illustration of the mountaineering difficulties in reaching Camp IV. is the story of the party conducted by Bruce and Odell on the 23rd, a day later than they were due to go up. Fresh snow had greatly altered the easy walk up the stones of the glacier. Instead of a brief hour up to the foot of the slopes nearly three hours were required. On the slopes themselves snow was found to be in the most disagreeable state. Hazard's party were coming down the ice chimney as Bruce and Odell, having left the porters lower down, were approaching the crevasse. They did not reach the crevasse, deeming the snow dangerous. Hazard was apparently deaf to their shoutings, and for an hour or so the two parties were never in touch.

'The two stories we heard in Camp III. that evening, with the news that not all Hazard's party had descended, mingled as we lay in our tents with the sound of ever-increasing snowfall, produced the nearest thing to gloom I remember during the expedition. As night came on the snow had a moister and stickier quality. Was this really the monsoon then? Four men caught on Chang-La for the first snow of the monsoon. One of them reported frostbitten. It was this circumstance that compelled rescue the next day and no later. I woke in the early part of the night for a coughing fit. The tent was brighter, and Norton murmured: "The moon." Sure enough, looking behind me, I made out through the canvas a bright unclouded moon. The snow had stopped. It was not the monsoon this time.

'Was there ever such a party as set out straggling up the snow-covered stones next morning? Norton, Somervell, and myself, the three who have climbed together on Everest before, must have appeared like a party of thrashed curs. I suppose we were half sick with the cold and the altitude. Never can three men have looked less like accomplishing a hard task; never, I confess, has a task appeared to my mind so utterly far away and unlikely to be accomplished. We drove ourselves somehow or other over the fresh snow of the glacier basin and up, up, slowly and wearily, puffing and coughing. "If only it were not for that blessed cough," I thought, "even in snow up to my knees I could have gone on well enough."

'We started at 8 A.M.; at 1.30 P.M. we were at the foot of the steep place below the ice chimney. Every ledge and step

were filled with snow. But there remained the thin descending line of rope, fixed by Somervell's party to help the porters. That blessed rope ! How pleased we were to grasp it with both hands and pull ourselves up the steep places ! On two dangerous sections above the crevasse Norton and Somervell in turn went ahead on the long rope, while the remaining two secured them.

' While Somervell was leading up and across the final slope the four porters above were held in conversation. As there was no time to lose, we wanted to know whether all were ready to move. The question appeared to puzzle them. Eventually one asked, " Up or down ? " Norton's reply seemed to surprise no less than delight them, so little had they realised the situation or appreciated the threat of more bad weather. It was 4.30 P.M., and we were already in cold shadow when Somervell reached the shelf, or, rather, reached within a few feet of it, for the rope on which we held him was just too short for the purpose. The quickest way, we had decided, was to make a handrail and send down the men one at a time to where Norton and I were posted ; but now the proposed handrail did not reach far enough, and the men had to move two or three steps before they could reach it.

' Watching with some anxiety, Norton and I suddenly saw two of the four men sliding down the steep snow-slope. By some miracle they stopped some 15 ft. below. Somervell was entirely equal to the occasion. We heard him shout : " What's Khaskura for : Stay still ? " Norton gave the right expression, and the two, clinging in their precarious situation, with fingers dug into the snow—neither had an ice-axe—were duly instructed not to stir for their lives. The others were passed along the rope. Somervell stuck his ice-axe into the snow and passed a rope round it, and in a few minutes we saw him apparently gather to his bosom the errant porters in a paternal manner worthy of Abraham. The two were passed along the rope.

❧ ' It had been our great good fortune to find that the frost-bitten member of the party of porters had suffered not in his feet but in his hands. We had not to use our one man-carrier brought up by Norton. He could go down on his own feet. He was a very sick man nevertheless. The ice chimney was no place for one hardly able to bear holding the fixed rope, and in our race with the oncoming darkness he necessarily suffered. But it was well for him, as for us, that the race was ours.

' As I headed the party trudging a little grimly across the glacier basin in the last light of day I dimly made out a party

approaching. It was Noel and Odell, with two or three porters bearing hot soup in thermos flasks. *Sic itur ad astra*. They will deserve their thrones in heaven. But not every party descending from Chang-La will find good tracks and an untroubled evening, still less will they meet hot soup. We know now what we have to do to make safe the way. We expect no mercy from Everest. Yet perhaps it will be as well he should not deign to take much notice of the little group of busy ones on the great north side, or, at all events, that he should not observe among the scattered remnants he has half put to flight the still existent will, perhaps power, to sting his very nose-tip.'

No. 8.

Camp III. East Rongbuk Glacier. June 8.
[Published June 26.]

I dictate the eighth dispatch from Camp III. I say dictate, as I am unable to write, as I am just recovering from an acute attack of snow-blindness, whereof more anon. Geoffrey Bruce, jack-of-all-trades, is my secretary. Both of us having had a go at high altitudes feel that this particular kind of work for the moment is what exactly suits us.

Above towers Everest, somewhat powdered with fresh snow, still and windless, and half shrouded in that type of damp, sticky cloud which surely this time presages the advent of the monsoon proper. Every eye in camp is turned on the final pyramid. Expectation is at its keenest, for somewhere there the final attempt, as it must inevitably be, is at this moment deciding the success or failure of the 1924 Expedition.

When last I wrote I explained that the original plan would require modification, partly owing to uncertainty, more definitely owing to the exhaustion, physical and moral, of the porters. I propose shortly to describe the psychology of these interesting men in more detail. At present it must suffice to say that Geoffrey Bruce and Shebbeare, who know them best, agreed that twelve to fifteen at the time of the return to the assault was the maximum to be depended upon to go beyond the normal 23,000 ft. It behoved us to cut our coat according to our cloth.

At a conference of climbers at Camp I. on May 27 it was decided that for the present the use of oxygen must be discarded; that a series of at least two attempts without oxygen, sleeping two nights on the mountain, above 23,000 ft., with the absolute minimum of organisation should be made; afterwards as the

fates might decide. Another precious day of fine weather was sacrificed on the 28th to the recuperation of the climbers ; no doubt the results repaid the risk. The day, further, was utilised by those ingenious and infallible mechanics, Odell and Irvine, in constructing a rope ladder from Alpine rope and tent-pegs, to enable the loaded porters to negotiate safely the ice chimney leading to Camp IV., of which you have already heard. Like all the work of the well-known firm of ' Odell and Irvine,' this proved a most complete success.

The weather now was apparently almost perfect for our purpose. The mountain day after day was standing clear-cut in azure ; day after day even the streamer cloud, the hall-mark of the master peak, was lacking from the master of all. The preliminary monsoon symptoms had entirely disappeared, yet we well knew that the monsoon might at any moment be on us in full force. The parties selected for the first two assaults were Mallory and Bruce, and Somervell and myself, with Odell and Irvine supporting on the North Col.

The party reached Camp III. on the 30th, accompanied by Noel and his kinema outfit. Hazard, destined to support from Camp III., arrived a day later. Beetham, unluckily suffering from an attack of acute sciatica, determined not to be out of the hunt, had broken off from the doctor's supervision at the Base Camp, and struggled manfully to Camp III. with his usual determination, prepared to cook, climb, or carry, indeed, to support the climbers in any way possible. It was my painful duty to return him to the Base Camp with an order to release Hingston, so that a doctor should be available to ascend to here and look after possible casualties. It must not be forgotten that the 1924 Expedition is two under strength.

With the above climbing parties at Camp III. were assembled that picked gang of porters who were considered still reliable to go high. They were fifteen in number, and distinguished by the name of ' Tigers.' At the stage set for the final attempts on the mountain the weather continued perfect. On June 1 Mallory and Bruce, accompanied by nine of the ' Tigers,' camped at the North Col [Chang-La], establishing *en route* a rope ladder. Odell and Irvine were to remain in support at Camp IV.

On June 2, still apparently under perfect weather conditions, the two climbers and eight porters started up the great north ridge to establish Camp V. But the weather on Everest is not always what it seems. Once past the jumble of crevasses and séracs separating Camp IV. from the true col, a bitter north-

west wind, one of the most formidable foes we have to face on Everest, smote the little party on the flank. This wind must be felt to be appreciated. Every member of the party was equipped with every device of windproof clothing experience could invent. Yet such is the keenness of the wind that it appeared to have the double quality of penetrating through and yet nearly blowing the laden porters out of their steps.

Progress up the north ridge of Everest does not lend itself to description. It is a fight against wind and altitude, generally on rock, sometimes on snow, at an average angle of 45 degrees. It will appeal to those who have ever tried mountain climbing above 23,000 ft. Camp V. was to be situated on the east or sheltered side of the ridge at about 25,300 ft. At about 25,000 ft. the endurance of the porters began to flag, and of eight only four made Camp V. under their own steam. The remainder deposited their loads, unable to go on. While Mallory set to work to organise the camp, Bruce and one Lobsang, meriting the distinction of being one of the leaders of the 'Tigers,' made two trips back from the level of the camp and brought up the missing loads on their own backs. Whites cannot carry loads at these altitudes with impunity, and it is scarcely to be wondered at that Bruce's heart was strained, happily only temporarily, in this fine performance.

Camp V. was now established—two fragile 10-lb. tentlets perched on an almost precipitous slope. The tents occupied by the non-oxygen party in 1922, collapsed and held in position by big stones, were clearly seen 200 ft. below. According to plan, five porters now returned to Camp IV., three picked ones being retained to sleep the night and carry a tinier camp some 2000 ft. higher on the morrow. Obviously everything depended upon the physical condition and *moral* of these three men. The most persuasive powers of Bruce could elicit little enthusiasm from them as to their next day's task. Apparently the wind had taken the heart out of them. With no rosy anticipations the party went to bed, with the sun still gilding the tops of the surrounding mountains, after the truly miserable but inevitable routine in high altitudes of cooking the dinner.

It was intended to make an early start next morning. This has been done, therefore is not impossible, but when Tibetan porters are concerned it certainly approaches the limits of the possible. Making a long story short, a series of visits to the men's tent while the climbers' breakfast was being prepared produced in the end nothing but the most unwelcome information that only one was fit to proceed. The other two professed

to be sick and totally unable to carry a load. Bruce talks their language fluently and has great influence over them, and there is not the slightest doubt that if anybody could have stimulated them to go on it was he. It was fairly evident that the three porters had shot their bolt, and that nothing more was to be got out of them. After a brief consultation it was decided to return to Camp IV. Half-way down the party under Somervell and myself, timed to follow the footsteps of the first party one day behind, was met. The doings of the second party will be separately chronicled by Somervell.

Mallory and Bruce, on arrival at the North Col, were met by Odell and Irvine, who were fulfilling, for the first time in the history of Everest climbing, the official rôle of supporters. Since 1922 we have recognised the necessity of this rôle, picturing the comfort to a returning party of weary climbers such support might afford. The most optimistic imaginations fell short of the reality, as produced by that 'well-known firm.' For over a week those two have lived on the North Col (28,000 ft.), and have cooked every meal—and only those who have done it can appreciate the recurring hatefulness of this operation. They have gone out day and night to escort and succour returning parties of porters and climbers over the intricate approaches to the camp, carrying lamps, drinks, and even oxygen to restore the exhausted. They have run the camp and tended the sick, and Odell, for one, has been down to Camp III. and returned to Camp IV., escorting parties or fetching provisions on three consecutive days. Whether we reach the top or not, no members of the climbing party can pull more weight in the team than these two by their unostentatious, unselfish, gruelling work.

The following is Somervell's story of our climb to 28,000 ft. :

MR. SOMERVELL'S STORY.

'The weather was looking more and more settled every day. On May 30, as Norton and I toiled up the glacier the third time this year to Camp III., we felt at last we were really going to be allowed a shot at the peak itself, and not merely baffled and foiled by a blizzard or hurricane at some comparatively low level. On June 1 we went up the steep ice-wall of the North Col with a few porters, and on arrival at the camp at the top of the pass heard that the other party had got off early, and were probably even then settling in at 25,000 ft.

'We slept well that night—beds of snow are much more comfortable than those of the stores at the camp below. Early on

the morrow we set out for the upper camp, six porters carrying extra food and bedding to replace what Mallory and Bruce would have taken up with them to a still higher bivouac. As we crossed over the snowy shoulder of the col to the windy western side the blast was most chilling. We drew our fur caps over our ears, tightened our belts, and went as fast as the altitude permitted, in order to keep warm. For though the sky was cloudless and the weather settled, Everest can provide on the finest day a wind chilling to the marrow. We had not been going long when Mallory and Bruce and their porters appeared above, coming down fast, an unexpected and unwelcome sight. They told us how they made a camp with two little tents, how the stoutest porter was sick, and the others unable or unwilling to go on. So there was nothing for it but to come back and hope for success of our attempt in the second of the series.

‘Rather apprehensive as to the attitude of our own porters on the morrow, Norton and I plugged along up the easy scree on the shoulder leading for over 4000 ft. from the North Col up towards the north-eastern summit ridge of Everest. We found Mallory and Bruce’s tents pitched on the steep but sheltered south-eastern side of the shoulder. Keeping four of our porters in the camp, where they spent a very fair night in a space 6 ft. by 5 ft., we then proceeded to settle down in the other tent of similar size. The floor had been well levelled by our predecessors, and, after making a good meal of pemmican and bully beef, coffee and biscuits, we spent a very fair night, during at least half of which we slept, finding no discomfort from the altitude or difficulty in breathing.

‘Another glorious sunny day followed, and we were delighted to find three of the porters willing to proceed and carry loads, tent, bedding, and food to the next stage. One porter especially deserved credit, as he had cut his knee rather deeply on a stone the previous evening. The easy scree of yesterday became looser as we got higher, and energy as well as temper suffered in the weary plod from 25,000 ft. to 26,700 ft., where the scree gives place to sloping slabs covered with small stones, which render footing rather precarious.

‘We all found the views most attractive, not only for their magnificence, but as excuses for frequent halts. Indeed, halts were necessary as we went along, as they enabled us to keep breathing sufficiently for our bodily needs. Finally, at the height of 26,700 ft., in a rocky little basin on the ridge we had to stop and pitch our tent. The situation was far from ideal,

but it seemed the best available in the vicinity, and on Everest you have got to take what you can get and be thankful. A lot of levelling had to be done, but the wind was kind, and, although by no means what we could have desired, the tent was at least habitable. The three faithful porters returned to Camp IV. quite fit, and armed with a note setting forth their prowess, and suggesting its reward with food at the lower camps, where no doubt they had the meal of their lives. In our tiny tent we cooked a good brew of coffee and a little soup, but the altitude was attacking our appetite and we could not fancy more than a morsel of solid food. Filling the thermos with coffee for the morrow, in order to avoid having to cook before an early start, we settled down for the night. Both of us were surprised that we got some sleep, at any rate, though not very much, but when morning arrived we were well rested and untroubled by breathing and other effects of great altitude.

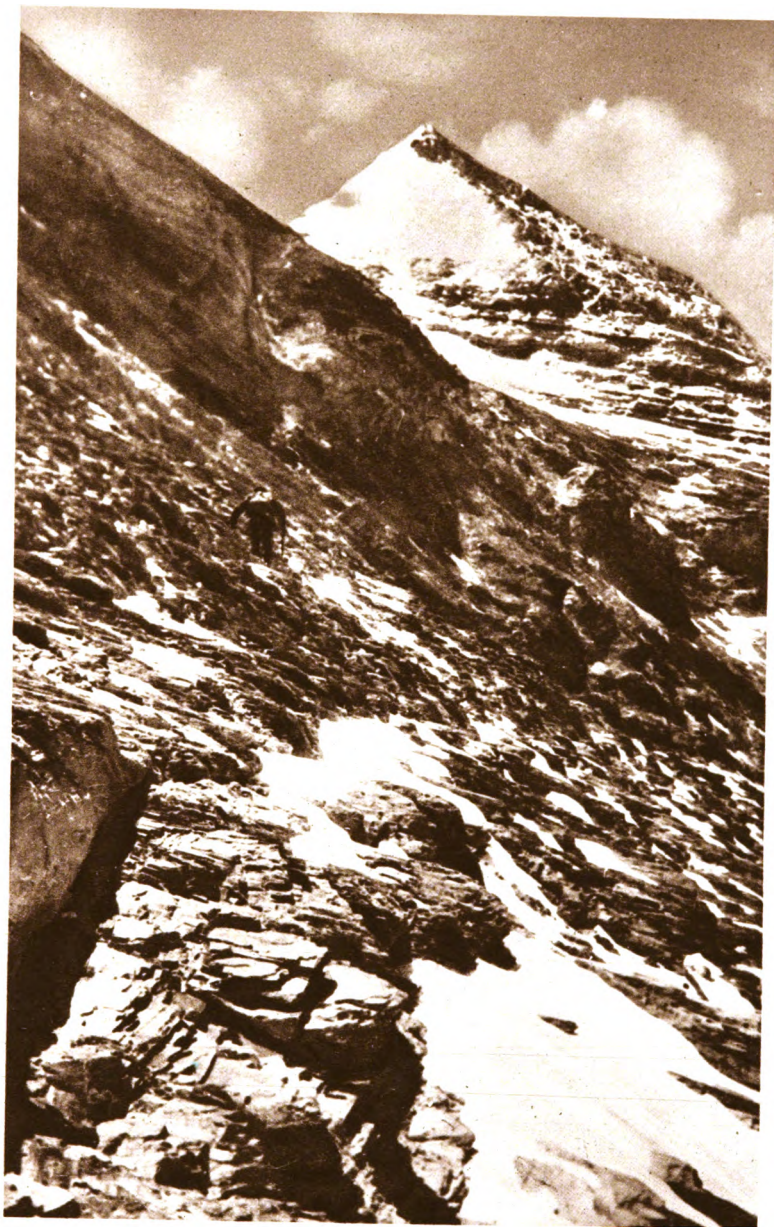
‘We got up full of hope as the dawn was breaking, but there was an early disappointment. Alas! the thermos had shed its cork during the night, and we had to waste nearly an hour melting snow in order to make more liquid. For both of us remembered how, in 1922, at a somewhat similar altitude, thirst, above everything, destroyed stamina and going-power, and we were determined to start our final climb with plenty of fluid inside us. At last we got going about 6.45 A.M., and trudged slowly up a broad rocky shoulder slanting across towards our right in the direction of the summit, for there the going seemed easiest; moreover, in that direction was a patch of sunlight. Our side of the ridge was in shadow and very cold, and we thought climbing in the sunshine correspondingly attractive. At length, panting, puffing, and sometimes slipping back on the scree and compelled to stop for a minute to regain our breath, we attained the sunlight, and soon began to get warm. We crossed the snowy patch, with Norton gallantly chipping steps in front, and reached the broad yellow bank of rock which is such a conspicuous feature in distant views of the mountain. This rock has weathered into horizontal ledges some 10 or more feet wide, and provides a safe and easy route towards the summit ridge; so up these ledges we went, pulling ourselves, with heavy breathing, from one to another, and walking along them occasionally for respite, but always keeping upwards and to the right, hoping by these means to avoid some of the loose-looking rock on the north-eastern ridge above.

‘But the altitude was beginning to tell severely on us. About

27,500 ft. there was almost sudden change. A little lower down we could walk comfortably, taking three or four breaths for each step, but now seven, eight, or ten complete respirations were necessary for every single step forward. Even at this slow rate of progress we had to indulge in a rest for a minute or two every 20 or 30 yards. In fact, we were getting to the limit of endurance. At a level of somewhere about 28,000 ft., I told Norton I could only hinder him and his chances of reaching the summit if I tried to go any further, as an intensely sore throat added greatly to the misery of the fight. I suggested that he should climb the mountain, if he could, by himself, and settled down on a sunny ledge to watch him do it. But Norton himself was not far from the end of his tether. From my seat I watched him slowly rise, but how slowly, and after an hour I doubt whether he had risen 80 ft. above my level. He realised that a successful issue to the fight was impossible, and after a little returned. We agreed reluctantly that the game was up. On the way to the summit was a patch of loose rock where it was desirable that two fit men should be roped together, but two men more or less "done to the world" were unable to hope to reach the top within a good many hours, and it was now 2.30 in the afternoon.

'So with heavy hearts, beating over 180 to the minute, we returned and retraced our steps; but slowly, for even downhill movement at this level is rather hard and breathless work, and both of us required frequent rests for regaining our breath and resummoning our energy. The view from the topmost point that we reached, and indeed all the way up, was quite beyond words for its extent and magnificence. Gyachang Kang and Cho-Oyo, among the highest mountains of the world, were over 1000 ft. beneath. Around them we saw a perfect sea of fine peaks, all giants among mountains, all as dwarfs below us. The splendid dome of Pumori, the finest of Everest's satellites, was but an incident in the vast array of peak upon peak. Over the plain of Tibet a distant range gleamed, 200 miles away. The view, indeed, was indescribable, and one simply seemed to be above everything in the world and to have a glimpse almost of a god's view of things.

'But we were far from being gods ourselves, tired and breathless as we were, the very epitome of human limitations. We revisited our high camp, and there packed our rucksacks and set off again downhill. We found the scree-covered slabs slow and annoying, and when we finally reached the snowy shoulder at 25,000 ft., where going becomes easier, the sun had set, and



MR. SOMERVELL'S PHOTOGRAPH OF SUMMIT OF EVEREST
WITH COL. NORTON STILL ADVANCING
Taken from 28,128 ft.

we still had 2000 ft. to negotiate in darkness. How well we remembered the same place in 1922, when we two, with Mallory, were exerting every effort to get down the invalid Morshead to the North Col alive ! But this time I was the invalid, and my congested throat only allowed me to breathe at a certain and all too moderate a rate. I fear that my extremely slow progress must have annoyed Norton fearfully, though of course he said nothing about it. Flashes from our electric torch aroused the North Col to activity, and Mallory and Odell came up to meet us with lanterns while Irvine brewed tea and soup in camp against our return. How we welcomed their presence as supporters in camp and contrasted our experience in 1922, when four of us returned to an empty camp and went to bed with empty stomachs ! This time we reached camp at 9.30 P.M. Within an hour we were fed, warmed, and fast asleep. Norton is still recovering from severe snow-blindness, unfortunately contracted on the climb. I can almost speak aloud again. We are both rather done in, too, in general condition, but are satisfied that we had the weather and a good opportunity for the fight with our adversary. There is nothing to complain of. We established camps, the porters played up well, we obtained sleep even at the highest, nearly 27,000 ft., we had a gorgeous day for the climb, almost windless and brilliantly fine, yet were unable to get to the summit. So we have no excuse—we have been beaten in fair fight ; beaten by the height of the mountain, and by our own shortness of breath. But the fight was worth it, worth it every time, and we shall cherish the privilege of defeat by the world's greatest mountain.

'We now await news of Mallory and Irvine, who to-day are making another attempt, hoping that they may reinforce the feeble summit air by artificially provided oxygen, and by its means be enabled to conquer the chief difficulty of reaching the summit. May the Genie of the Steel Bottle aid them ! All of us are hoping that he may, for nobody deserves the summit more than Mallory, the only one of our number who has been at it for three years.'

This ends Somervell's story.

The two attempts without oxygen failed to reach the summit. I hope to discuss later in your columns the vexed question whether success on these lines was possible or not. In any case, I was delighted to find on my arrival at Camp IV. on the night of June 4 that Mallory had rightly determined in my absence that there must be one more attempt, and that immediately

and, if possible, with oxygen. Bruce, the condition of whose heart definitely prevented him from taking part in another attempt, had already gone down to Camp III. to see if it were possible to supply sufficient porters to put on oxygen so as to make the attempt with an absolutely minimum load. The men were forthcoming. Mallory had already decided that the climbers to make this final assault should be himself and Irvine. Unremitting and indefatigable work which had been put in by the latter on the most defective of the oxygen apparatus fully justified his inclusion in the party. On the morning of June 6 these two, with eight porters, started for Camp V., intending to sleep the following night at Camp VI. and to make the assault on the summit to-day.

Their movements are shrouded in mist and mystery, but one brief note reached us yesterday from their perch near the top of the North Ridge by the hand of a returning porter. It is to the effect that Noel, with the kinema, should be on the look-out for them about the base of the final pyramid that starts 650 ft. from the top at 8 o'clock this morning. The returning porters report that the pair were going exceedingly strongly with oxygen yesterday; from every point of view the situation is dramatic. One more small incident is worth noting.

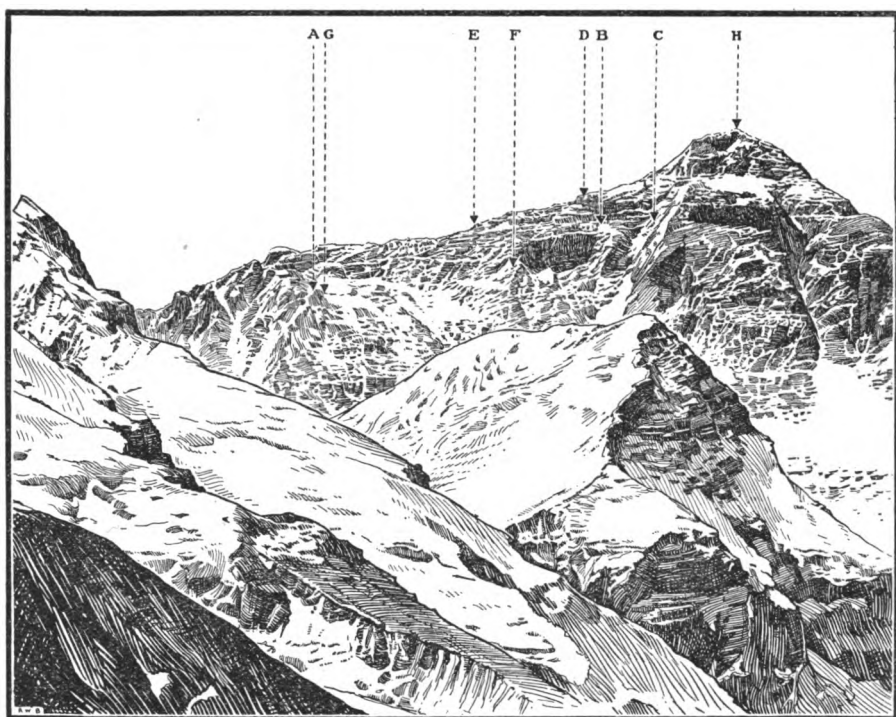
During the night of June 4-5 on the North Col I was smitten with acute snow-blindness, and for sixty hours was completely and absolutely blind. At 10 A.M. on June 6 Hingston and two porters arrived from Camp III. to relieve and, if possible, escort me down. I was anxious to descend, as my presence at Camp IV. could only be an embarrassment to Odell and Hazard, who had now taken the place of Irvine in the rôle of supporters. Hingston, being unable to perform the miracle of restoring my sight at the moment, performed, with the help of Hazard and the two porters, another miracle.

The route to North Col is admittedly an Alpine climb. They shepherded me down some 1500 ft. of sheer ice and snow, placing my every footstep, leading me by the hand, and supporting me with ropes, fixed and unfixed, with complete security. Hazard turned back after roping me from the top of the chimney to the bottom, and Hingston saw me the rest of the way into Camp III.

Hingston is a famous goer on a hillside and has a limited experience of snow and ice conditions in the Pamirs, but he has never done any Alpine climbing, so I think it must be admitted that his performance was remarkable, and it was certainly one that I shall not forget in a hurry.

Base Camp. June 11.

With the deepest regret I add these few lines continuing the above dispatch. Mallory and Irvine perished on the mountain beyond all doubt. They were last seen by Odell from Camp VI. going strong for the top. I have not yet seen Odell, but estimate that this was about 11 in the morning of the 8th, and that



- A. Camp VI, 26,700 feet.
- B. The point reached by Somervell in 1924.
- C. The point reached by Norton in 1924.
- D. 'The Second Step,' where Mallory and Irvine were last seen.
- E. 'The First Step.'
- F. The point reached by Finch and Geoffrey Bruce in 1922.
- G. The point reached by Mallory, Norton, and Somervell in 1922.
- H. The summit, 29,002 feet.

the point reached at that time by the climbers was about 28,000 ft. Nothing has been seen or heard of them since. Odell returned to Camp IV. that night, and until about noon on the 9th the absence of news occasioned only anxiety, as the climbers might well have passed the night in Camps V. or VI.

At noon on the 9th Odell and two porters started from Camp IV. and spent the night at Camp V. About 1 p.m. on the 10th Odell reached Camp VI., whence he signalled that there was no sign of the missing men. Camps V. and VI. were under continuous observation by Hazard from Camp IV. throughout. These were provided with magnesium flares for distress signals, and there is no doubt that the climbers did not return to them. This puts any possibility of their survival out of the question, for no one could spend two nights on the mountain under existing conditions except in one or other of the two high camps and live.

The only likely explanation of the tragedy is that there was a mountaineering accident, unconnected with questions of weather or the use of oxygen. This is borne out by my own observations four days previously of the nature of the ground they were crossing when last seen. I remained at Camp III., directing operations by messenger, watching for a signal through the telescope, until 5.30 in the afternoon of the 10th, by which time I saw Odell reach Camp IV. safely. My condition and that of Captain Bruce, the only climber with me, precluded our reaching Camp IV. in time to be of any help, and, beyond a letter of instructions and the use of a system of signals, I had to give the supporting party in Camp IV. a free hand. They appear to have done all that was humanly possible.

I should add that I myself forbade any reconnaissance beyond Camp VI., as the weather was extremely threatening and conditions on the mountain appeared to be as bad as they could be, and I had to consider the lives of the two British and three Himalayan members of the Expedition who were still at or above Camp IV. I shall, of course, give you all details in my next dispatch.

No. 9.

Rongbuk Base Camp. June 14.

[Published July 5.]

The Expedition leaves the Base Camp to-morrow, bound for a short period of recuperation in the Rongshar Valley, under Gaurisankar, before starting on its homeward march. The fickle weather, which has played so many dirty tricks this year, continues to be brilliantly fine, and there are indications that the monsoon has ceased for the moment. But there is no question of a resumption of hostilities on the mountain. Every one of the surviving climbers has shot his bolt. I have before

me a medical report showing that each of us has a more or less dilated heart, besides various minor disabilities. The trouble will right itself at the lower altitudes to which we are bound, but would probably be permanent if further high climbing were attempted. This the medical officer [Major Hingston] definitely forbids.

There is yet another casualty to report. Man Bahadur, a Nepalese, the assistant bootmaker, who was very badly frost-bitten in the feet, as reported in my message of May 13, died of pneumonia at the Base Camp under Hingston on May 25. Perhaps it was merciful, as he would have lost both feet had he lived.

We leave here with heavy hearts. We failed to establish success, for who will ever know whether the lost climbers reached the summit before the accident which it may be assumed caused their death? The last point at which they were seen was determined by the theodolite as 28,227 ft.—less than 800 ft. from the top. Together with the height reached by Dr. Somervell and myself, which, measured by the theodolite, was 28,128 ft., these constitute a world's 'record' for climbing with and without oxygen respectively.

But the price is out of all proportion to the results. Much will be written by those at home of both Mallory and Irvine in regard to the various departments in which they distinguished themselves. I shall only say a few words on how we knew them here. Mallory was for three years the living soul of the offensive on Everest. I believe the thing was a personal matter with him, and was ultimately somewhat different from what it was to the rest of us. The story of his determined, and ultimately successful, reconnaissance in 1921 is now well known. In 1922 he formed one of the party which reached 27,000 ft. without oxygen and established what was then a world's height 'record.' This year he was earmarked for the first attempt with oxygen, but this was prevented by the weather. Then he took part in the first attempt without oxygen, but had to turn back at 25,000 ft. Only three days later he started on the last fatal attempt with oxygen, and this time who will say whether victory was at last his or not before he died?

We always regarded him as an ideal mountaineer, light, limber, and active, gifted with tremendous pace up and down hill, and possessing all the balance and technical proficiency on rock, snow, and ice which only years of experience give. But the fire within made him really great, for it caused his spirit constantly to dominate his body to such an extent that, much

as I have climbed with him, I can hardly picture his ever succumbing to exhaustion. As a man he was a very real friend to us all, a cultured, gentle spirit curiously contrasting with the restless, fiery energy he displayed in action. His loss is irreparable no less to his friends of the successive Everest expeditions than to the very much larger circle of those who loved him in England.

Irvine was described in an earlier dispatch by General Bruce as our 'experiment,' for he was a mountaineer of limited experience and twelve years younger than the average age of the Expedition. But the experimental stage was short indeed, for it was a matter of hours rather than of days. The qualities which made him such a success when sledging in Spitsbergen brought him to the front; his first winter's ski-ing in Switzerland placed him, and the Oxford boat made all realise immediately that we had here no untried boy, but one of the most valuable members of the new Expedition, and, what is more, one who could take his place modestly, but with absolute equality, with men of so much senior age. Then in no time his cheery *camaraderie*, unfailing good nature, and untiring mechanical ingenuity and resource made him not only valuable, but invaluable.

I do not know how we are going to get on without him. Physically he was the strongest of us. He did surprising feats in carrying and hauling loads; his times up some stages of the East Rongbuk Glacier were unequalled.

In my last dispatch I spoke of his work on the North Col in the rôle of supporter—a true test of a man's mettle, but nothing new to him, for ever since Khamba Dzong he had been working unremittingly and unostentatiously every day and all day for the good of the expedition and of its individual members. We mourn in him the loss of a true friend to every one of us, and a most gallant gentleman.

I have asked Odell to amplify his previous brief account of the final attempt and tell the story, as he took part in it from the position in support at Camp IV. His performance in climbing once to 25,000 ft. and twice to 27,000 ft. in seven days constitutes, I consider, a remarkable feat to be accomplished on Everest or on any other of the great Himalayan peaks. Perhaps more remarkable still is the fact that he suffered less than most other climbers in doing so.

It remains for me to say a few words about the evacuation of the glacier camps. Throughout you have heard little of Shebbeare, yet he played a most important part in them. After

the first evacuation of Camp III. on May 11 it was decided that Shebbeare's knowledge of the language and of the psychology of the porters called for his presence on the lines of communication rather than at the Base Camp. Accordingly, he was established as king of Camp II. From that moment we at the higher camps never had to look over our shoulders or give a moment's anxious thought to our line of supply. Food for the sahibs and porters, fuel and stores of all sorts, arrived smoothly as required, and, more important still, we knew that the comfort and health of the porters on the lines of communication were well cared for.

When the time came on June 11 to evacuate all the camps from Camp III. downwards—the higher camps we decided to abandon all standing—Shebbeare took the matter in hand, and in three days, by good organisation and the use of every porter who could carry a load, he had cleared to the Base Camp every single article the value of which justified transport home across Tibet. So smoothly was the operation performed under his skilful leadership that there is nothing to write of it.

Our one free day here before we finally leave this old Base Camp of conflicting memories, so bleak and inhospitable after the sunny plains of Tibet, so homelike and cosy after the far bleaker glacier camps, is fully occupied. Every man that can be spared is at work arranging the loads for to-morrow's march, or employed on erecting a monument on one of the great conical moraine heaps which overlook the Base Camp to commemorate the names of those who lost their lives in the three Mount Everest expeditions.

Odell's story of the final attempt on Everest—and victory?—is as follows:

MR. ODELL'S STORY.

'Colonel Norton has requested me to relate the events connected with the last great climb of Mallory and Irvine, a climb a good many aspects of which I had the advantage of witnessing during a protracted period of eleven days, while acting in support at the North Col (23,000 ft.). The duty of being in support, from meaning readiness to support at need an exhausted member of the party on the mountain, largely transformed itself into cooking and preparing meals for whatever climbers made the North Col Camp a place of call. This function kept us fully occupied, particularly as all water had to be obtained by melting snow, snow that at this altitude was of an exceedingly dry and powdered variety.

' On June 6, following an early breakfast of fried sardines, joyfully acclaimed though but moderately partaken of, Mallory and Irvine left the North Col Camp for Camp V. (25,000 ft.), accompanied by five porters, with provisions and reserve oxygen cylinders. Yesterday, using oxygen, they had already ascended from Camp III., 2000 ft. below, in two and a half hours. They were highly pleased with their performance, which seemed to augur well for the final attempt on the mountain. The next day they ascended to Camp VI. (27,000 ft.), which had been established by Norton and Somervell on their "record" climb three days previously. The same day I ascended in support to Camp V., Hazard by this time having arrived at the North Col to replace me. Porters returning from Mallory that night were the bearers of a hopeful message in a note which said that they had only used a minimum of oxygen up to 27,000 ft., and that "the weather was perfect for the job." The latter I could well appreciate, for, looking out that evening from the little rock ledge on which the tent was pitched at Camp V., I saw that the weather indeed seemed most promising for the morrow.

' The situation of the camp was unique and the outlook commanding in the extreme. Westward there was a savagely wild jumble of peaks, culminating in Cho-Oyo (26,750 ft.), bathed in pinks and yellows of most exquisite tints. Right opposite were the gaunt cliffs of Everest's north peak, intercepting a portion of the wide northern horizon, of a brilliant opalescence which threw into prominence the outline of a mighty peak far away in Central Tibet: was it General Pereira's supposed rival to Everest? Eastward, floating in the thin air, the snowy top of Kangchenjunga appeared, and lastly, the beautifully varied outline of the Gyangkar range. Sunset and after at that altitude is a transcendent experience never to be forgotten.

' The early morning of June 8 was clear and not unduly cold at such an altitude. The two porters I had brought with me to Camp V. complained of sickness and headache, and altogether I was not unthankful for an excuse to send them down to Camp IV. at the North Col, for I especially wished to be free during the ascent for as wide a geological survey of the mountain-face between Camps V. and VI. as possible. Soon after I had started on my task banks of cloud began to form, which periodically immersed one in gloom, but the wind remained quite light for such an exposed ridge. Now and then there would be an accompaniment of sleet or light snow. I could see above me frequently during these squalls that there was

a glow of light, indicating clearness at a higher altitude, and hoped that Mallory and Irvine were above the mist.

'At 12.50, just after I had emerged from a state of jubilation at finding the first definite fossils on Everest, there was a sudden clearing of the atmosphere, and the entire summit ridge and final peak of Everest were unveiled. My eyes became fixed on one tiny black spot silhouetted on a small snow-crest beneath a rock-step in the ridge; the black spot moved. Another black spot became apparent and moved up the snow to join the other on the crest. The first then approached the great rock-step and shortly emerged at the top; the second did likewise. Then the whole fascinating vision vanished, enveloped in cloud once more.

'There was but one explanation. It was Mallory and his companion moving, as I could see even at that great distance, with considerable alacrity, realising doubtless that they had none too many hours of daylight to reach the summit from their present position and return to Camp VI. by nightfall. The place on the ridge referred to is the prominent rock-step at a very short distance from the base of the final pyramid, and it is remarkable that they were so late in reaching this place. According to Mallory's schedule, they should have reached it several hours earlier if they had started from the high camp as anticipated. That they had encountered bad conditions and snow-covered rocks and other obstacles was likely. However, in my opinion, from the position at which they were last seen, they should have reached the summit at 4 p.m. at latest, unless some unforeseen and particularly difficult obstacle presented itself on the final pyramid. This seems to be most unlikely, for we had scrutinised the last slopes with telescopes and binoculars and had seen that technically the climbing was easy. Perhaps the two most likely explanations of their failure to return were a fall or inability to reach camp before darkness set in. I rather incline to the latter view, and consider it very probable that they sheltered in some rock recess and fell asleep, and a painless death followed, due to the excessive cold at those altitudes.

'After the brief glimpse of the party above described I continued up to Camp VI., which was reached just as a rather severer blizzard started. The camp consisted of one small mountain tent perched on a ledge, backed by steep rocks by no means conspicuous or easy to find. I brought up with me provisions for the camp, and, after placing them in the tent and sheltering for a while, I decided to go out in the direction of the

peak along the mountain-side, in case the bad weather should have compelled the party to turn back. I whistled and yodelled through the driving sleet to give the returning party the right direction, but soon realised that in point of time it was a worthless task, for they would still be beyond hearing even if they were returning. Perhaps they were right above the blizzard in sunshine. Within two hours the storm had blown over and the whole north face was bathed in sunshine. I searched the upper crags for another glimpse of the party, but nothing could be seen.

‘In accordance with earlier arrangements suggested by Mallory himself, I returned to the North Col, and with Hazard kept watch till late for signs of the returning party. As they had not returned next morning we assumed that perhaps they were still sleeping at Camp VI., having reached it at a late hour the night before, but we were unable with field-glasses to detect any movement around the distant tent. At noon I decided to ascend to Camp V., stay the night, and proceed to Camp VI. the next day to ascertain if they had returned and whether help was needed in consequence of some mishap. I arranged a code of signals with Hazard, by means of sleeping-bags placed conspicuously on the snow in case assistance, medical or otherwise, should be required. Two porters again came with me to Camp V., but again they had to return to Camp IV. because of indisposition.

‘After a very cold night I pushed on to Camp VI., this time carrying with me an oxygen apparatus, and also provisions for the missing party. I reached the tent of Camp VI. in the afternoon, only to find everything as I had left it two days previously, and as Mallory and Irvine had left it on the morning of their climb. Leaving the tent, I climbed some distance, and worked out along the face in the direction of their route, searching for some clue. But what hope was there on such a vast mountain-face? Weeks of diligent search by a party fully equipped for such difficult and particularly trying work at that altitude might not produce any result or unravel the mystery.

‘At length, as the day was drawing to a close, I reluctantly gave up the search and signalled down to Hazard at the North Col, over 4000 ft. below, that no trace could be found. Closing up the tent, and leaving it with the last relics of our lost companions, I made my way down the north ridge, having now and then to take shelter behind rocks from the violent and bitterly cold west wind in order to restore warmth and prevent frost-bite, and at dusk reached the North Col Camp, with its profound

comforts of hot soup. The next day we evacuated this camp and the others in succession down the East Rongbuk Glacier.

'Has Everest been climbed? Colonel Norton has referred to this question. It will ever be a mystery. Considering all the circumstances and the position they had reached on the mountain, I personally am of opinion that Mallory and Irvine must have reached the summit. At least they have established a mountain altitude "record."'

No. 10.

Kyetrak. June 19.

[Published July 15.]

I write this *en route* to the Rongshar Valley, for the expedition has shot its bolt and the Rongbuk Valley is for us already a thing of the past. The monsoon, which kept us on tenterhooks for so long, has definitely begun, and our jaded party are bound for ten days' recuperation under the shadow of Gaurisankar. I hope later to give an account of the wild and little-known country to which we are heading.

In all the accounts of our doings the factor of altitude, of course, has been mentioned, but almost exclusively in regard to its effect on the actual efforts of the climbers and so far as it affected their pace. I feel that no account of this Expedition can be appreciated without a somewhat fuller description of what is really meant by altitude. I sometimes think when I enlarge upon the hardships endured, in giving the actual temperatures of 10° to 24° below zero F., that a large proportion of readers are inclined to contrast the figures with well-known instances of low temperature in Canada, the Arctic, and the Antarctic. What of the winter journey so graphically described by the author of 'The Worst Journey in the World' [Mr. Cherry-Garrard's account of Scott's expedition to the South Pole], with daily *minima* of nearly 70° below zero? I do not suggest for a moment that any Everest expedition has been called on to endure anything approaching the hardships of this last unique performance.

The point is that the factor of altitude introduces a new element which very markedly accentuates what otherwise would be hardships of a not very serious nature. Between the Rongbuk Monastery and the place where for two years now the Base Camp of the Expedition has been pitched, the old terminal moraines of the Rongbuk Glacier have nearly blocked the valley with great piles and mounds of boulder and scree, and through these a narrow pass runs.

Here is the gate of altitude. Below are the sunny plains of Tibet, where there are birds and butterflies and flowers, and where a man may enjoy life. True, he may suffer the minor effects from shortage of oxygen in the air even outside the gate, but he can enjoy life. Above, altitude holds sway ; in a word, man does not enjoy life. The height of the gateway is, perhaps, 16,000 ft., and in putting this as the boundary I am consulting my own feelings. Others may disagree on the exact point where life ceases to be enjoyable, but all will agree, I think, that it is within 1000 ft. and 2000 ft. of my figure. Within the gate life is not. To be exact, plant life struggles for another 2000 ft. if you like to search for it. I did meet a chough at 27,000 ft. He only came to look at me, thinking me mad. But, broadly speaking, everything is dead rock, snow, and ice, the three elements of which that upper world is composed.

Within the gate the temperature drops with a bump ; you know it the moment you arrive, and you dress accordingly. The result is a windproof suit, fur ear-flapped cap, and extra sweater. Here I have never seen rain even in June (though rain was actually recorded in 1924 on two occasions for the first time), and for snow is substituted the powdery snow of the upper world. Above all, here the wind is incessant, a searching, penetrating, blustering wind, sweeping off the great snowfields above ; but much has already been written of this wind, and I would only emphasise the fact that it is a special brand within the gate.

These are only side issues ; the thing that really matters is the lack of oxygen, which not merely begins to make itself felt when you start for the wild uphill ; it permeates and dominates every minute of your life, affects appetite and sleep, forbids the smoking of a pipe without the expenditure of innumerable matches, makes a labour of dressing and undressing and getting into one's sleeping-bag, the undoing of one's boots, the rising from a chair, saps the springs of all energy and enthusiasm, and affects the whole well-being as much as on a summer day you are affected if the sun goes in and a chill breeze gets up. All this refers to the Base Camp when one first arrives, for happily acclimatisation is a very real thing. On return to the Base Camp after four or five weeks spent at a higher point, one may well forget that he is still a prisoner within the gates of altitude.

I believe the effects of altitude increase fairly consistently with the actual height risen right to the top of Everest. Let

me now describe an extreme case, say between 27,000 ft. and 28,000 ft., and an intermediate one, say at Camp III., at 21,000 ft. A good night may be spent at 27,000 ft.—one at least has had such an experience—but it is unlikely often to be repeated; so let us wake after a thoroughly bad night, just at daylight, in the bitter cold. The thermos flask, a two-pint one, intended to provide drink for breakfast without more snow melting, has shed its cork during the night. The unfortunate climber, cherishing it in his sleeping-bag, makes the discovery at 3 A.M., for the coffee has not remained warm.

It is necessary, therefore, to melt snow over the 'Meta' burner, a nightmare procedure that seems to have filled our every spare moment at all the high camps. It sounds simple enough. You crawl out of bed and then out of the tent, fully dressed, and pick up two aluminium pots, fill them with snow at a snowbed 20 yards away, return to the shelter of the sleeping-bag, during which time your tent mate has started the 'Meta' solidified spirit burning in the stove. Here altitude enters. The above simple proceeding I have repeated a good many times. It requires hardly anything, demanding mere will-power and determination. But by the time you reach the outside door of your tent you are completely exhausted. You sit and pant and rest for several minutes in the cold, then continue the journey and fill two pots with powdery snow, pressing it in with your thumb, which of necessity is inside one of the pots and in contact with the snow loses all feeling immediately.

The next moment the pot is bounding down the steep slope below the tent. It comes to rest by pure chance 50 ft. downhill. You retrieve it and refill it and hand both pots through the tent door. The next minute you fall exhausted on the bed. It seems touch and go for a minute or two whether by rapidly panting you will ever catch up the deficit of oxygen in the lungs the exertion has caused. Perhaps three-quarters of an hour later you have cooked and eaten—who will describe your hatred of the scant but loathsome meal?—and filled the thermos for the day and donned your frozen boots. The energy expended already is enough to have carried you half-way up most Alpine peaks.

You start climbing. Curiously enough, this is not perhaps as bad as what preceded. The process is largely mechanical but incredibly slow. Above 27,000 ft. you may aim at doing twenty consecutive paces before you pause, arm on bent knee, to pant and rest. You will seldom get beyond thirteen. You

sit down for some minutes at least every 100 ft. The least slip or stumble, and recovery almost beats you in this miserable business. I cannot conscientiously record that dulling of the intellect often described as a feature of high climbing. I believe the intellect remains clear, and it is the will-power which is sapped. There is no doubt that all the best qualities, the energy and determination to conquer, will be at the lowest ebb. You must draw on the recollection of what you determined perhaps the day before yesterday that you would do.

Now and again the altitude produces its last weapon. The constantly and rapidly repeated intake of breath and catching at the back of the throat seems to have a curiously drying effect. Whatever the cause, the effect is a pronounced desiccation of the whole system. In the great cold the thirst seems not to make itself felt until late in the day, when it becomes intense. There is little doubt that this tremendous desiccation of the body is one of the primary causes of breakdown and failure at great heights. If, as so often happens, the climber starts with a common high-altitude cough and throat (half of the whole party suffered from it in 1924), this dryness is the one thing needed to put him out of action some time before the day is finished. All day there is depression of spirits; there is no spring, no exhilaration, no enthusiasm. One cannot even move fast enough to keep oneself warm. The whole thing is a desperately unpleasant duty until at about 2 p.m., with an unattainable summit obviously beyond its reach, the party turns back dejectedly to the distant haven of comparative refuge at Camp IV.

I have said that acclimatisation is a very real thing. The fact was definitely proved in 1924, but with it was proved the companion fact that at altitudes of 21,000 ft. and over what we gained in one direction by acclimatisation we more than lost in another, if conditions were severe beyond a certain point. Conditions of cold and discomfort, which at lower altitudes are completely without effect upon a healthy party, are at this altitude fatal to the efficiency of British and Himalayans alike. For example, between May 19 and 25 seven climbers and a dozen porters lived in Camp III. All did either one or two trips in unfavourable conditions to the North Col, 2000 ft. above, and nothing else but work in camp. The night temperatures were as low as were ever experienced here, and it snowed most days. The food tents and sleeping-kit were all of the usual high-altitude type. As a result, at the end of six days practically every member was temporarily useless

for high climbing, 50 per cent. had bad coughs and throats, and their voices were gone. Many had had little or no sleep for some nights, and all were obviously weak and almost ill, though the *moral* of the climbers continued to be good; but the heart had been taken out of the porters, and it was necessary to retreat to the lower camps to recuperate for some days. This would have been caused neither by altitude alone—for in favourable conditions most climbers improve up to 21,000 ft., or even 23,000 ft.—nor by the temperature conditions in which they lived, for, as I have said before, in the Antarctic and similar countries, men thrive and put on weight in such conditions.

The cause was a combination of altitude and comparative hardship. Just watch with me for one minute a party starting from Camp III., this time a routine trip to the North Col. Surely these men are just returning from a long and tiring day and not starting a short climb of 2000 ft. in the freshness of the morning. Their shoulders are hunched and they are simply crawling; there is no spring or swing in their gait: perhaps they are sick. Not so, they are suffering from altitude. Have I painted the picture in too dismal colours? Perhaps for myself, but I have just escaped from the gate.

No. 11.

Rongshar Valley. *June 24.*[Published *July 17.*]

The following account of the Sherpa and Bhotia porters has been written by Captain Geoffrey Bruce:

‘A gay and motley throng of hillmen assembled to greet us at Darjeeling on our march, all eager to take part in the expedition to Everest. The news had preceded us that we would require about seventy suitable men. Here there were two hundred and fifty at least, mostly Sherpas and Bhotias, but among them could be seen Limbus of East Nepal, Lepchas of the deep valleys of Sikkim, and wild-looking men of the northern provinces of Tibet. It is quite certain that money alone could not be the chief attraction to many of them, who to my knowledge could earn better wages by sticking to their jobs in and around Darjeeling than by following the fortunes of an expedition through Tibet to the mountains. There was no motive with most of them other than sheer love of adventure, which, coupled with their light-hearted, care-free manner, makes the hillmen of these parts such attractive people.

‘ To those of us responsible for their selection it was a difficult task picking out the best with nothing but appearance to go by. Appearance is proverbially deceptive, and to that rule the hillmen are no exception. We were mainly guided in the selection by the principle of taking men obviously of good breeding and of slight though well-proportioned build in preference to the bulkier and at first sight more impressive-looking giants. For the moral is more important than the physical when attempting to scale Everest. On the whole the selected amply justified themselves, and it was especially noticeable how the porters who went the highest up the mountain were all very much of a type, smallish, lithe, and trim, while all the bigger men seemed to fade away lower down.

‘ When we left Darjeeling the porter corps consisted of seventy men, of whom about half were Sherpas and half Bhotias. The Sherpas are natives of the southern slopes of the main Himalayan chain, and the Bhotias of the Tibetan plateaux to the north of the range. Both speak Tibetan as their mother tongue. Except one Gurkha, who acted as cook to the Gurkha non-commissioned officers, no other clans were represented in the corps, all others being eliminated in the process of selection. The five weeks’ trek to the Rongbuk Base Camp was spent in getting the men well nourished and in the best possible physical condition before the work on the mountain began. As in 1922, they were given no loads to carry, and they always had the best food, clothing, and tent accommodation. The policy was amply repaid, for on our arrival at the Base Camp not one of them was sick.

‘ This period of camping and marching across Tibet had the further advantage of affording unique opportunities of observing the porters collectively and individually, especially with a view to earmarking those likely to go high later. As a people they have many virtues, being simple, hard-working, and cheerful. When once they get to know the sahibs they are loyal and affectionate. Among themselves they are generous, always ready to give a helping hand to one in need. But for all that they are not saints, and to ascribe to them qualities purely angelic would be a grave error. We observed no signs of angels’ wings sprouting on any of them, not even on the back of Norbu Yshay or Lobsang, who so gallantly led the little parties to Camp VI. at 27,000 ft. Further, I am convinced that butter will melt in their mouths. I have occasionally known other delicacies not to be found in the scale of porters’ rations also melt away in a mysterious fashion.

. But, given the opportunity, the bottle is apt to prove a very serious source of trouble, though I must say in fairness to them that since we left Darjeeling cases of drunkenness were happily few and far between. On the return journey, however, it is futile to expect such a high standard of good behaviour, and the radiance of the kindly jar will undoubtedly prevail before Darjeeling is reached and the porters are finally paid off. But these are characteristics of which we were already aware from our experience of the Expeditions of 1921 and 1922. Then the porters were never really up against hardship for a prolonged period, and were never asked to go on making continuous efforts in face of extreme weather conditions and acute bodily discomfort. In neither of those years were the men subjected to the terrific searching tests that this Expedition has undergone.

‘ These tests, of a nature necessarily severe, enabled us unerringly to separate the sheep from the goats. The faces so doubtfully scanned at Darjeeling six weeks before now read like a book. Townee, who till now seemed to value himself above his comrades and give himself airs, fades into the background. The real natural leaders stand out and the others fall in their proper places. Until a trial such as was imposed on us by the mountain elements takes place, the true form and value of the Sherpa and Bhotia porter are most deceptive to gauge. At first the endurance in carrying capacity of all of them appears amazing ; they go gaily along with a big load, showing little or no signs of tiring, long after we would have thought it impossible for them to continue.

‘ But it is not so astonishing, really, when one reflects that they had carried huge loads daily from childhood upwards, always in steep places and frequently at altitudes up to 19,000 ft. It has become natural to them to walk loaded. Thus until the real test is made all appear equally good. There is little or no indication how big is the margin of strength and determination left. This year’s experience tended to prove that in nine cases out of ten they reach their limit without previous warning, and then become utterly *hors de combat* once the limit is reached. Whether on account of wind, cold, fatigue, or sickness, the man will not come again to any hard work at high altitudes in that season.

‘ Seeing men suddenly fail in this way is a bitterly disappointing and exasperating sight. There is only one factor capable of delaying and postponing to some extent this collapse, and that is the presence of a sahib who may by influence and

personality succeed in urging the man to further efforts before the crash comes. Once he has given in I do not believe anything can set him going again; the limit has been reached for him and there is nothing beyond. The Sherpa and Bhotia porter at one moment ceases to be an object of admiration and sinks to that lowest level to which the Oriental is wont to sink when he is a sick man. With a few notable exceptions he literally does not possess that little extra reserve of will-power which the white man can produce in emergency and which makes all the difference between success and failure in a crisis. Fortunately exceptions exist, and this year has produced some supermen.

'The two advances up to 23,000 ft., which were each accompanied by blizzards and a temperature down as low as 56° of frost, and followed by disheartening withdrawals to the lower camps, failed to damp the spirits of a few of these men. To develop and encourage those who from the start had been a magnificent example to the others the experiment of employing some of them as non-coms. was made, and on the whole proved very successful. Two of these non-coms. showed themselves to be of quite outstanding character. I shall describe them and their performances briefly.

'First, Norbu Yshay, a Sherpa from Sola Khombu, an "old soldier" of 1922. Physically of medium height, sturdy, well knit, he possesses an iron constitution, and when he thinks the occasion sufficiently important (it must not be forgotten that he is quite the "old soldier") he shows signs of great determination also. Thus it was that he and his party of two porters erected Colonel Norton's and Dr. Somervell's camp at 27,000 ft. at Camp VI., although three other porters had failed only the day before. Nothing could have been easier than that the rot should spread to his party too. It is entirely to Norbu Yshay's credit that his gang went on resolutely and succeeded.

'Equally wonderful, if not more so, is the record of Lobsang, a pure-bred Tibetan. A man of varied experience, he had among other accomplishments been a Gurkha rifleman in the Afghan War of 1919, presumably under a *nom de guerre*. He also distinguished himself in 1922 by reaching Finch's and my camp, over 25,000 ft., with a full load. In 1924 he was in the party which on June 1 carried loads to Camp V., 25,300 ft., and with Mallory and me went down again to Camp IV. in charge of the returning porters. After a few days' rest in Camp II. he was ready for further efforts, and on June 6 with

a party of eight carried a load to Camp V., the camp of Mallory and Irvine. He and two others spent the night at Camp V., and the following day accompanied the two climbers to Camp VI., 27,000 ft., with the necessary loads.

‘I must confess to one unfortunate selection among the non-coms., and he will be anonymous. He is a man one would pick out of a thousand, tall above the average, beautifully proportioned, and a wonderful mover. He had a fine face, too, which would lead one to expect great things of him. In 1922 he twice ascended to 25,500 ft. Although his work through the first three weeks of our occupation of the glacier was admirable and evoked praises on every hand, yet when the great day came he failed. Medical examination at Camp III. was unable to throw any light on the cause of his failure, which was one of *moral* rather than physique; in short, he was not “for it.”

‘Had Providence granted us perfect weather from the start I do not in the least doubt that the majority of the porters would have been capable of carrying their loads to Camps V. and VI. They would have achieved wonders. But after the two failures to establish Camp IV. on the North Col, 23,000 ft., I estimated that only twelve to fifteen porters would be ready to face the music again. This estimate proved extremely accurate. Beyond the fifteen “Tigers” I do not think any would have carried loads farther than the North Col this season. This was the chief reason for the modification of the original plan of making two non-oxygen attempts, beginning on June 1.

‘The unforgettable terrors that the mountain holds for these ignorant people are not all physical. They are most superstitious. Some declare that on the North Col at night the fierce barking watch-dogs that guard the goddess of the mountain can be heard warning intruders to keep clear of her sacred dwelling. Still, in spite of these setbacks, the standard of what the porter is capable has been raised since 1922. In 1924 fifteen reached 25,300 ft. Of that number six put loads into camp at 27,000 ft.

‘In this Expedition we were fortunate in having no fatal casualties among the carrying porters. Only two serious cases were treated in hospital, one of frost-bite of the hands and the other a broken leg, both getting on well. The broken leg case is not altogether without its humorous side. The patient, in the march across Tibet, had been the doctor’s servant. Some time before the accident the doctor complained of having mislaid sundry underwear, but the garment could not be found.

The doctor happened to be at Camp III. when the stretcher arrived. As it drew near he noticed that the patient showed curious symptoms, leaning forward and apparently massaging violently his legs upwards from the ankles. The doctor was just in time to catch a glimpse of his high-altitude pants disappearing in a roll over his late servant's knee.

'In regard to the Sherpa and Bhotia porters and their employment in future expeditions, they will be forthcoming, and there can be little doubt that from among them six or seven will erect a camp under any conditions even higher than Camp VI., but to ensure this they must be systematically looked after and cared for from the start. No detail, however small, tending to increase their comfort and happiness must be overlooked. The results will repay trouble and forethought a hundredfold. The porters fully appreciate the situation. When the detachment taken by General Bruce back to Chumbi rejoined the expedition near Shekar Dzong they were asked how they fared in crossing Tibet. "We managed all right," they replied, "but we had no sahib to look after us."'

No. 12.

Tingri Dzong. *July 5.*
[Published *July 25.*]

Our little rest cure in the Rongshar Valley is over, and the expedition is again on the 'long road that is always new,' homeward bound to Darjeeling. The primary object of the trip—recuperation at a moderate altitude—has in this respect been a great success. It is not too much to say that the party, almost without exception, starts for home sound in wind and limb, and is certainly a very different party from the one that left Rongbuk a fortnight ago. Most of us have got weight to recover still. Big calf development is not, apparently, a characteristic of the Everest climber; many of us still look best with a pair of thick socks. But it is an ill wind that blows nobody good. Our little Bhotia ponies will be the gainers when we return to the plateau.

If the Rongshar Valley has come short of expectation in some other respects, I take the blame, for, moved by recollections of the Kama Valley two years ago, I painted a highly coloured picture of the delights that awaited us for the benefit of those who had not seen that lovely spot. I first predicted a descent from a barren pass to fields studded with the smaller and daintier alpine flowers in successive stages, azaleas, rhododendrons, and primulas (a dozen varieties), and stunted pine

trees outlined against the snows of Gaurisankar ; and, finally, the forest, primeval with cypress, silver fir, and hemlock, anything up to 150 ft. high, concealing strange subtropical flora and fauna, a camp-fire and balmy air, and unfamiliar delicacies, such as chickens and potatoes and green vegetables.

Well, some of this we found at Rongshar, but by no means all. The first sensation as we descended the barren Phuse-La was caused by a delicious whiff of such air as we had not met for months, soft and laden with the aromatic scent of shrubs and flowers. But the promise was scarcely fulfilled, as almost immediately we entered a deep, narrow, rocky gorge. The scenery was grand, great cliffs towering above a racing, raging torrent, but the vegetation lacked the luxuriance of the Kama Valley. There was scarcely room for forest, and the flowers were limited in their variety. Of Gaurisankar and its satellites no peep was obtained once the gorge was entered.

During three rather longish days' marching, as we wound down this endless gorge, the view was a constant repetition of the same features, the towering cliff on one side, a similar towering cliff on the other a little farther off, and a steep hillside blocking the next turn in the valley. Soon the predominant flowers became and remained a carpet of mauve irises underfoot, a bower of pink and cream roses over the path.

On the third day we reached our destination, Tropdo, a rockbound little village, deep under the base of Gaurisankar. To find a camping site was not an easy task, but, bursting through a riot of rose-bushes nearly blocking a tributary torrent, we discovered a small glade carpeted with irises, a great cliff overhanging with a regular smugglers' cave at the foot. This, our base camp, was in sufficient contrast with that base camp we had recently left. It was a blow to find that chickens might not be killed in the sacred precincts of Gaurisankar and that the potatoes were not ready to be dug.

Three days after our arrival we separated to explore the neighbourhood, Somervell and I upwards to try the view and sketch the elusive Gaurisankar, and the remaining five going down the gorge to the Nepal border. The latter party marched for two days, finding the gorge ever deeper and steeper. For two miles in one place a vertical cliff of 2000 ft. towered over a milky torrent fairly racing between its banks, much as the Arun River races—that is, one continuous rush, not a series of waterfalls and pools. In patches of big forest we met trees almost equalling those of the Kama Valley, but always restricted in extent by the surrounding cliffs. The vegetation

there is almost in every respect a replica of that of the Darjeeling hills.

The inhabitants of the one village were cheery and open-hearted folk, speaking Nepalese fluently, though of Tibetan origin, and presented a marked contrast with the more boorish peasantry of the plateau—a primitive people these, largely cut off from contact with the outer world, the womenfolk working in the scanty fields naked to the waist.

There were other aspects of this gorge expedition on which I prefer not to dwell at length. There were Gargantuan repasts of fowls and potatoes and succulent bamboo shoots, partaken in spacious Whympers tents, and no one suggested the bringing back of such delicacies for two hardy mountaineers now perched 5000 ft. above in the mist. What became of the last of the Expedition sugar?

Meanwhile the said mountaineers, Somervell and I, had found a delightful camping site on a shelf 2000 ft. above the valley. Near here many flowers, missed in the gorge below, were found for the first time this year, all the azaleas, three of the more beautiful missing primulas, and many other old friends. From here we saw Gaurisankar, a dream mountain. Gaurisankar is a paltry 23,000 ft. odd, but it rises from its base between 8000 ft. and 10,000 ft. at an acute angle, and finishes in a cone of snow and ice, perfect in outline and proportions. Facing us was that long knife-edge of ice familiar to all readers of Colonel Howard Bury's book, 'Everest: The Reconnaissance, 1921'—in Wollaston's photograph taken from the same direction, but from 30 miles farther away.

There is only one way to see a really beautiful snow mountain, and that is as we saw Gaurisankar. Bit by bit, through a rent in a curtain of cloud, we got a glimpse, first of the summit floating high in mid-air, then great sheets of rock and ice and subsidiary buttresses, whetting the appetite for that brief two-minutes' view of the whole mountain, the base still wreathed in swirling clouds; 15,000 ft. of it we saw, top and bottom, a sight to make one giddy.

When we all forgathered again at the base camp great rival claims were put forward, one school extolling the joys of the subtropical scenery and the table, the other the magnificence of this unique view and the pleasures of the simple life. Some gorgers—I should say, gorge explorers—were tempted to put in a night on the shelf. For Beetham and his camera the chance was not to be missed, but the fickle mountain remained shrouded in mist, and the party returned, half-convinced that

our vaunted view was a figment of the imagination and our sketches a deliberately concocted plot for the unwary.

So, on June 30, we left the Rongshar Valley and threaded our devious way towards the upper world again, sad to leave the soft, fragrant air, the greenery and the flowers, but consoling ourselves with the promise of sunshine and the charm of wide horizons.

No. 13.

Yatung. July 22.
[Published August 1.]

I feel that the series of letters I have written to you would be incomplete without some final discussion of the feasibility of climbing Everest in the light of the experience of 1924. First let me say a few words on two kindred questions: 'Should Everest have been attempted?' and 'Will Everest be re-attempted?'

We have little doubt that the sad loss of Mallory and Irvine, following the death of seven porters in 1922, will raise considerable controversy on the former question. I know there was a large body of opinion in England previous to the 1924 tragedy which stigmatised the whole undertaking as a wanton risk of valuable lives, and this point of view will doubtless be accentuated by what has occurred. The old question: 'What is the good of it?' will be reiterated with added point. This question has been dealt with at some length by Sir Francis Younghusband in his preface to 'The Assault on Mount Everest,' and I can add but little to his able and, to me, convincing reply. It is true that there can be no immediate material gain either to the members of the expedition or to the public at large from a successful attempt to climb the mountain; indeed, the former will generally be considerable losers from this point of view. Is not this, in the material age in which we live, an argument in favour of making the attempt—is it not a good thing to run some risks and to undergo some hardships for an ideal divorced from sordid considerations?

In the absence of the great purifier, war, there must be something in favour of an undertaking which, as Jorrocks would say, may be likened to 'the himage of war with only 25 per cent. of the danger' (25 per cent. Jorrocks, not mine). In the piping times of peace, how else than by such undertakings as Polar and Everest expeditions is the last flicker of the old spirit of adventure and enterprise which made the British Empire to be kept alive?

Will Everest be attempted again? This question I am not in a position to answer. A member of the Expedition is, happily, free from the difficulties of finance and organisation confronting the Everest Committee. But we are a persistent people. War proves that we have a certain genius for attaining through failure success, and the things which most stimulate and harden the determination of Englishmen are obstacles, failures, and casualties. I can speak for the members of the 1924 Expedition in saying that the loss of friends and the setbacks endured made us at least feel strongly that now, if never before, Everest must be climbed—perhaps not in the year 1925, perhaps not for some years. I know only some of the difficulties of the preliminary organisation, but sooner or later the torch lit by Mallory and Irvine must be carried on lighted to the summit.

Can Everest be climbed? Assuredly. It is possible that it has been climbed. If the 1924 Expedition has dashed the hopes and modified the opinions of some of the more optimistic of us (and I was among these), if it still leaves one very serious gap in our knowledge essential for ensuring success, it has filled all the remaining gaps. We started in 1924 with the fullest consciousness of these gaps. The Expedition has proved that porters can carry the requisite loads to nearly 27,000 ft. None of us now has any doubt that under favourable conditions a camp can be established at least 500 ft. higher, say 27,300 ft., just under the north-east shoulder of the mountain. It has proved that there is nothing to prevent climbers from sleeping well about 27,000 ft. and starting comparatively fit and well on the morrow. Our doubts on these two points were two of the most serious gaps in our experience when we started operations in 1924. On the march to Everest last spring it was constantly reiterated that if a non-oxygen party could camp at about 27,000 ft., and an oxygen party at 26,500 ft., if both could get sleep and start fairly fit on the morrow in fine weather, the trick was done both ways. We were optimistic.

It is by no means proved, but the evidence increases that the advent of the monsoon is normally preceded by a spell of comparatively fine, settled weather. Further evidence on this subject must be procured and would be valuable. It is abundantly proved that each year's experience increases the comfort obtainable at moderate altitudes by good equipment, and that, except in really bad weather, the height where reasonable comfort can be provided can be progressively raised. We had even schemes for comfort in that vile spot, Camp III.

And with comfort go health and efficiency. On acclimatisation we have now clear and definite ideas. Previously we were but groping a way to these ideas.

Finally, as General Bruce has more than once pointed out, the standard of achievement is automatically rising. In 1922 four of us set out to discover whether human beings could live without oxygen at 25,000 ft., and, if so, could they sleep? In 1924 Odell and Hazard took a walk at 25,000 ft. in an interval in their duties as supporters of Camp IV. (23,000 ft.), just to study geology and enjoy the view; four climbers slept at nearly 27,000 ft.; in ten days Odell went from 23,000 ft. three times down to 21,000 ft. and twice up to 27,000 ft.—a performance that we should hardly have considered possible in 1922.

So much to the good; but we had also learnt lessons of a different sort, and these must be laid to heart by any future party. One serious gap in our experience which we failed to fill is the possibilities of the oxygen apparatus. Below 23,000 ft. there seems little doubt that the apparatus as so far designed and modified does not pull its weight. In other words, the benefit derived from inhaling oxygen does not compensate for the drawback of its weight on the climbers' back. Above 23,000 ft. Odell is the only surviving climber who used it. He carried one cylinder only and used it up to about 27,000 ft. Even with this modified weight on his back his verdict is that he gained little, if anything, over his previous trip to the same height without oxygen. Mallory and Irvine were reported by the accompanying porters to be going strong on oxygen. On the other hand, the time and place where they were last seen on the morrow indicated that either a very late start was made, possibly due to their having to repair some defect of the apparatus, or they were going as slowly as the non-oxygen party four days previously. In spite of the then much more favourable impressions of Finch and Bruce in 1922, it would seem that the value of the oxygen apparatus is doubtful, unless its weight is materially reduced, for it must not be forgotten that its use entails a most severe strain on the organisation of the porters.

The possibility of really bad weather almost throughout May came as a very unpleasant surprise to us in 1924. The effect on the whole party was so serious, the conditions produced on the mountain above 21,000 ft. were so hopeless, that it would appear advisable in the future not to make a move above, say, 19,000 ft. until really favourable weather sets in, and this,

even though the remote possibility must be faced that the party might fail to get beyond or even reach the North Col in any given year.

The physical difficulties of the last thousand feet of the mountain were probably underrated before 1924—rather, it is more correct to say, the dangers—for the final pyramid and its approaches appear to consist of that unpleasant type of rock which is dangerous because it appears to offer no difficulties. The strata slope outwards and downwards at a somewhat sharp angle, and the rocks are by no means firm when their surface is covered with a powdering of light snow, which, while giving no support to the climber, conceals possible footholds and makes the going all dangerous. The general slope of this part of the mountain is such as to render a slip probably fatal. The lesson to be learnt from this is that the final assault should not be undertaken deliberately when fresh snow is lying on the rocks. This alone, to my mind, precludes the idea, mooted more than once, of an attempt in September after the monsoon. When the rocks are bare of snow there should be little danger for a party of experienced climbers.

The last unpleasant surprise we met in 1924 was that apparently there is a point somewhere between 27,500 ft. and 28,000 ft. at which the lack of oxygen in the air begins to render progress so slow that it remains uncertain whether without oxygen the party would have time to reach the summit safely. This is a very important point, but I do not consider the evidence of 1924 sufficient to establish it. For the party of two whose experience supplies the only data had already suffered too much from prolonged exertions and exposure to provide a real test. It is probable that a fitter and fresher party would not have slowed down to anything like the same extent. If, then, we strike the balance of the favourable and unfavourable lessons we have learnt in 1924, the result evidently favours the view that success will crown the effort to ascend the 800 ft. of the mountain which remain to be climbed. There is little doubt that by camping at 250 ft. higher on each of two successive nights above the North Col an improvement of some 500 ft. could be made on the height of Camp VI. Thus, on the last day, the party may be called on to do some 1800 ft. to the summit, against the average of 1400 ft. or 1500 ft. achieved by the two parties in 1924. Allow for a descent only to Camp V., postulate a party fresh and fit, and not exhausted by exposure or severe exertion, give us but as favourable weather as was encountered by the first party in 1924, few of

us doubt that the summit can be safely reached with or without the improved oxygen apparatus. Half the battle is won if the climbers and porters start off from the North Col in really good condition and good health.

This is easy to talk and write about, but is most difficult to accomplish. But the experience of two years has taught us much in regard to the conflicting claims of acclimatisation and conservation of energy, and something, if not a great deal, of how it is possible to improve the comfort of the glacier camps. The rest depends on the patience, patience, and again patience, that is the most difficult type of patience, which will wait, and await the fine weather essential to success, even though all indications point to an early arrival of the monsoon, and with it the end of another year's efforts with, perhaps, nothing accomplished. And so, whatever the verdict, whether Everest should or will be attempted again, we of the 1924 Expedition are confident that it can be climbed, despite the dictum of our good friend the Shekar Jongpen. Commiserating our misfortune he summed up by saying: 'Myself think God's mountain will never allow.'

JOINT MEETING OF THE ALPINE CLUB AND OF THE R.G.S.

THIS meeting, to receive the reports from the Mt. Everest Expedition of 1924, was held on October 17 at the Albert Hall. It was attended by a large number of members of the two Societies.

The meeting was opened by the Earl of Ronaldshay, President R.G.S., and the following reports were then made:—

THE ORGANISATION AND START OF THE EXPEDITION.

BY BRIGADIER-GENERAL THE HON. C. G. BRUCE.

I FIND that I am down to follow the President of the Royal Geographical Society both in my capacity as President of the Alpine Club and as the original leader of this year's Expedition.

As President of the Alpine Club I consider myself free to offer my warmest congratulations and to express my admiration to Colonel Norton and to the members of the Expedition, for his (Colonel Norton's) wonderful leadership, and to all for the

heroic efforts which they all made. I must also express on the part of the Alpine Club the deep sorrow felt for the loss of our two gallant members who made their sacrifice in the most terrific of all mountaineering history. They were two magnificent personalities, and have the finest cenotaph in the world, and are worthy of that splendid monument.

Speaking now as the original leader of the Expedition, I must pass on to its organisation. Colonel Norton, Captain Bruce, Mr. Shebbeare, and myself found ourselves in Darjeeling in the last days of February. There we found a large collection of porters, both true Tibetans and Sherpas, for us to choose from. We also found local supplies which had been ordered by our excellent agent, Mr. Weathered, all ready for forwarding to Tibet. Our old interpreter and our old headman of porters were also ready to re-engage.

Owing to the experience gained on previous expeditions, and our exact knowledge of the geography of the district, and of where the high camps would be placed, it was found possible to earmark our stores for the different camps, so as to save time at our Base Camp. These arrangements were made by Norton and Bruce, and Shebbeare was despatched to Kalimpong to take delivery of the stores and forward them on by our contractors into Tibet. All went swimmingly, and as soon as our whole party was collected, which was at the beginning of the last week in March, we were able to set out.

We marched in two parties in order not to overcrowd the rest-houses on our route, and collected in the beginning of April in Yatung. Certain arrangements had to be made there, but the party and its entire stores were gathered in Phari by April 5. We were a day earlier than in 1922, but experienced the whole way up an infinitely milder climate. Phari, to our intense relief, and somewhat to our surprise, was almost balmy. There we had rather more than our expected troubles with the local authorities, who are of a peculiarly grasping nature, and had taken the opportunity of putting up the prices of everything 25 per cent. over 1922 rates. We had a two days' battle, and a dramatic *finale*, when a telegram to the Prime Minister of Tibet reporting their conduct was torn up in their presence as soon as a suitable agreement had been arrived at. We had previously discovered that orders had come from Lhasa directing every assistance to be given us, but the final collapse of the Phari authorities was both dramatic and amusing.

From Phari began the second stage of the march across Tibet to the Base. We left Phari on April 7, the main party,

owing to the curious district restrictions on transport in Tibet, marching *via* the Dongkar-La to Khamba Dzong, and Major Hingston, Mr. Macdonald, our postal expert, and myself going with a light outfit by the Tuna, Dochen, and Tatsu route. However, I was obliged through illness to relinquish the command of the Expedition at Tuna, and hand it over to Colonel Norton.

Disappointing as this step was, it was partially made up to me by the personality of my successor, for no finer or more inspiring leader could have been found, and this is borne out by the manner in which he dealt with the immense difficulties and hardships occasioned by the terrible conditions met with this year.

One word about the weather. All through May there was a wave of cold and wet weather over the whole of the Western and Central Himalayas, brought by strong winds from the west, and giving in the Punjab and North-West Provinces almost the lowest temperatures ever experienced for that time of year. These storms and winds had nothing to do with the monsoon, which itself was favourable, in that it was about a week later in arriving in the Eastern Himalayas than is usual. This condition was a thorough bit of bad luck, and very unusual. I think it will be seen that at the time of the final effort on Everest the weather was extremely favourable, which was probably due to the slight delay in the monsoon.

With regard to the porters, they had an extraordinarily rough time, but to get so large a percentage as six men who were able to carry loads to the terrific height of 27,000 feet is in itself remarkable, considering the way the men had to be chosen; for, after all, with the exception of certain old hands, they were picked from a crowd of men who had come for daily labour to Darjeeling.

I will leave it to other members of the Expedition to give an account of the personal prowess of its members, but I must draw attention to the results of the Expedition.

It is perfectly clear that the summit of Everest can be reached—certainly with oxygen, and in all probability without it—for there is no doubt that the very severe conditions experienced before the weather cleared up left the members of the Expedition less fit than they otherwise would have been.

We have quite clearly increased the standard of expectation. Who would have thought four years ago that men could climb without oxygen to over 28,000 feet? Who would have thought that three ascents between 25,000 feet and 27,000 feet would

have been accomplished inside the same week by the same climber? And who, again, could have forecast that men were to be found who could possibly carry loads to a height of 27,000 feet?

A slight addition has also been made to the geography of the mountain. The West Rongbuk Glacier and its neighbourhood have been surveyed, and other additions to the map have been made. At the head of the Dzakar Chu another great Himalayan gorge has been further explored.

Later on, no doubt, Major Hingston will give an account of his physiological observations on members of the Expedition, and he has brought back also an immense collection of insect and plant life.

I will now hand the story on to Colonel Norton, who will tell you about the *personnel* of the Expedition.

THE PERSONNEL OF THE EXPEDITION.

BY LIEUT.-COL. E. F. NORTON.

I feel that an account of an expedition which omits some description of the members is a sadly colourless business. I should like to be able to make these men real flesh and blood to you instead of mere lay figures. Unfortunately, the time available is too short for me to hope to do this, even had I the talent, and I must content myself with a very brief introduction.

I have an uncomfortable feeling that, as I go on, you will conceal a smile at what you may term a mutual admiration society. I would be the last to suggest that we were a party of little tin saints, but it is a matter of common knowledge that expeditions involving some hardship have a way of bringing out the best that is in every man and of obscuring his faults. In this lies the greatest virtue of such enterprises. It is not my business to-night to talk of the faults.

When General Bruce went sick we sustained a loss which—irreparable as the loss of such a leader must be to any expedition—was doubly so in an exceptional year. For it was just in the conditions which we met this year that General Bruce's well-known influence over our Himalayan *personnel* might have made so great a difference.

Yet it must not be forgotten that we owe him much of what was achieved this year. To him must be given the credit of

having collected the very strong party we were, for with him rested the last word in the selection of the British members, and it was he who actually chose the porters and other Himalayan establishment.

The very name of Bruce is a charm to conjure with all along the Himalayas, but more particularly in and around Nepal. He it was who, by his treatment of the people of the country, great and small, consolidated the permanent way across Tibet which a Mount Everest expedition now follows so comfortably.

I would add that—much as I appreciated the chance of leading this year's party—no one recognises more than I do what we lost when we lost our leader, and it was with nothing but regret that I got my opportunity under such circumstances.

I think every one will agree with me when I say that the first task of an Everest expedition is to get to Mount Everest. So I speak next of the man who virtually took us across Tibet to the mountain, and well up its slopes to the higher glacier camps.

Without Geoffrey Bruce's previous experience and sound advice we should often have been sadly at a loss on our journey to the Base Camp; and, arrived there, it was organisation which established Camps I., II., and III. in record time. But first and foremost it was Geoffrey Bruce who ran our porters: he it was who disciplined them, who attended to their wants and comforts, and who put heart into them when they were down on their luck. For he is gifted with the power of leadership, inherent in the first instance, and practised in eight consecutive years of war.

I think that if our porters were asked to sum him up their verdict would be: 'The Captain Sahib is a hard man—but a just. Skrimshanking and malingering are useless with him, and he has an unaccountable lack of sympathy with the common failings of mankind; perhaps he is a teetotaler. But he knows us and understands us and our language; when we are really in trouble he is the man to go to. Further, he will never demand of us anything he is not prepared to do himself.'

Bruce is emphatic that he is no mountaineer: then he is a very good imitation of one. Two years ago he established with Captain Finch the world's record by reaching a height of 27,200 odd feet. This year, when we recast our plans half-way through the campaign, he was selected to go with Mallory on the first attempt as being undoubtedly the fittest and strongest of us. Unfortunately, he temporarily strained his heart carrying into camp (at 25,500 feet) the loads of porters whose

strength failed them short of camp. And so he could take no further part in the high climbing.

To my mind Somervell shares with Mallory the distinction of having been one of the mountain's two most formidable antagonists.

His physical toughness is remarkable: in 1922 he reached a height of nearly 27,000 feet, and was the only one of those who went high to be absolutely unaffected. His holidays in the Alps have always taken the form of climbing one first-class peak per fine day for weeks on end. This year his going power high up was seriously affected by a very bad cough and sore throat—the 'high-altitude throat' which attacked so many.

But Somervell has—as had Mallory—a moral reserve on which he draws to make good any physical disabilities, so that it hardly matters whether he is fit or not—he is always fit to go high on Everest; and it was this reserve of determination which carried him this year to the North Col under circumstances of which you will hear again, and later to a height of 28,000 odd feet without oxygen.

Gifted with an exceptionally quick and versatile brain he is a surgeon by profession, an artist and musician in his spare time. One of the most familiar sights on the Expedition was his figure perched on a rock sketching, or, surrounded by itinerant Tibetan musicians, jotting down their music on the back of an envelope. Not the least interesting thing in an interesting personality is that he has deliberately chosen to apply these many talents to the duties of surgeon in a Mission hospital in remote Travancore in preference to a sure success in Harley Street.

Odell shared one characteristic with Somervell: he acclimatised slowly. We did not in time this year draw what may well be the logical inference—that in this, as in other matters, slow is sure. Certain it is that these two slow acclimatisers have achieved more with less physical deterioration than anyone else in our brief record of really high climbing. I feel that Odell was never given the opportunity he should have had this year, and that our chances of success were prejudiced thereby.

Odell's reputation as a mountaineer and an explorer is known to most of you. Being also a scientist and a mechanic, he shared with Irvine the labours and responsibilities of the oxygen apparatus besides organising the important department of high-altitude cooking with Primus or Meta stoves.

As a geologist not the least of his achievements was the

discovery of the long-hoped-for fossils at a height of over 25,000 feet.

It was the famous firm of Odell and Irvine which gave so fine a display of the most unselfish team work in a year when team work was a salient feature. I refer to the way in which they created the rôle of supporter on the North Col.

Having experienced to the full the meaning of such support, I speak with feeling. On its way up the mountain each party was welcomed by the Old Firm, its tents were allotted, it was fed, waited on, and served in every way. I leave you to guess how these attentions were redoubled when the same climbers returned somewhat the worse for wear after going high, and the supporters met them with lights and drinks well on the Everest side of the North Col and took complete charge of the weary party.

Odell alone has carried out the last and hardest task of a supporter—the forlorn hope search for a party fatally overdue.

If the performance of these duties denied him his chance of the top it gave him another opportunity: it gave him the opportunity of beating all records for continuous climbing at really high altitudes. For in addition to three previous trips from No. III. Camp to the North Col—one successful and two abortive—he, in ten days, did this same climb three times, and went from the North once to 25,500 and twice to 27,000 feet. The astonishing thing about this performance is that he finished up very little the worse for his exertions.

The stars in their courses fought against Beetham, and so deprived us of the services high up of a mountaineer of exceptional speed and endurance.

Passing through Sikkim on the outward march he contracted a severe case of dysentery. By sheer determination and force of character he recovered by the time we reached the Base Camp from an illness that would have sent many of us back to the Swedish Mission in Sikkim. Just as he was getting fit again at the Base Camp he was attacked by sciatica and badly crippled.

Heartbroken at being out of all that was going on, he got out of bed and, defying doctor's orders, he struggled 'dot and carry one' up to No. III. Camp—determined to cook, to carry, to do anything to help the rest of the party. But here it was so evident—despite his sedulous efforts to conceal the fact—that he was a cripple that his brutal leader had to return him to the Base.

He contributed the majority of the still photographs this

year, and the public will have the chance of judging the very great success of his efforts in this direction.

But his whole heart was above the North Col.

I can only say that if an indomitable spirit coupled with every physical qualification of a first-class climber is what we want on Everest, you should hear of Bentley Beetham again. No mountain in the world can stand against the concentrated rage that he will bring to bear on his next attempt.

Hazard, like Odell, acclimatised slowly, and that his part in the high climbs was not a greater one may be largely attributed to this. He went to 25,500 feet, and, on Irvine's departure on the last climb, took his place as supporter on the North Col, to which he had already twice escorted convoys of porters.

When, heartily sick of the squalor and discomfort of high-altitude tents and feeding, we left the Base Camp for our little holiday among the trees and flowers of the Rongshar Valley, Hazard volunteered to lead a survey party back to the ice and snow of the West Rongbuk Glacier, of which the reconnaissance was regarded as a task of some importance. Undeterred by the breaking of the monsoon the day after he started, he successfully carried out this operation, and we owe the results achieved to his hardihood, for—with the exception of Beetham, whose photographic skill was needed in the Rongshar—no one else would have volunteered for a prolonging of conditions of which we had had more than enough.

Hingston was our doctor and naturalist.

The qualities required for a doctor on an expedition of this sort are peculiar. Medical skill is one of them, and Hingston was well qualified in this respect.

Far more important are the human qualities of common sense, sympathy, and energy; the power to detect unerringly the really sick from the fancied sick, the power to enlist the confidence of the simple hill-folk with whom we had to deal. It was the possession of these qualities that made our doctor the right man in the right place.

As a naturalist he probably enjoyed the whole Expedition even more than any of us; and when I tell you that his collections include some ten thousand specimens it will give you some idea of his industry and keenness. Every stone in Tibet was to him a potential gold-mine, for under it might lurk something really fascinating—such as a tick.

Hingston professed himself no mountaineer, and I believe he was right in that he has only a limited experience of ordinary snow slopes in the Pamirs, and has done no climbing in the

Alpine sense. But it was characteristic of his all-round efficiency that he once escorted a blind man down the 2000 feet of formidable ice-cliffs, snow-slopes and glacier between the North Col and No. III. Camp, placing his every footstep and holding him up in complete security in a style that would have done credit to an Alpine guide.

Shebbeare is in the Indian Forest Department : his work has taken him much into the foothills of the Himalayas in Bengal ; consequently he talks Nepalese and knows and understands the hill-men. These qualifications helped to make him the valuable transport officer he was.

But it was his temperament that made him so great an asset to the party. Not for nothing has he the reputation of being the most popular man in the Darjeeling district, for he is peculiarly gifted with those qualities of good nature, equanimity and sympathy which made him as popular with our porters as with the British members of the party.

Hence it was that once he was established as king of Camp II. i/c of lines of communication, we never had to give a thought to this department, no less important on an expedition of this nature than in war, while the porters were content in the knowledge that they had a 'father and a mother' in the old 'she bear.'

The name of Noel is as familiar to most of you as his work.

This year he specialised on the kinema, leaving most of the still photography to Beetham. The results of his most assiduous labours and of his organising ability will speak for themselves. It is more of his part as a member of the Expedition that I would speak now. For though he ran his own separate organisation he was out to help the main Expedition in every way, and his arrangements were so detailed and perfect that he was often able to supply us with equipment or manpower when these were most welcome. Even now I cannot think of his little tins of potted meat without emotion.

From the loan of a magnesium flare as a distress signal to an offer to act as supporter up to any height, there was nothing he was not ready to do for the furtherance of our schemes. As he is entirely unaffected by cold and hardship, and has a happy gift of hitting it off with the hill-men, he was a most valuable member of the party, apart from his technical skill in his own department.

In two years Mallory and I have spent many weeks together in a small tent ; we were friends, and if you share a tent with a friend you get to know him very intimately.

Mallory had an ideal figure for a mountaineer, but it would have made little difference had he been of an inferior build—so entirely did his spirit dominate the flesh: of him might have been written the lines:

‘ If you can force your heart and nerve and sinew
To serve your turn long after they are gone,
And so hold on when there is nothing in you
Except the Will which says to them: “ Hold on!” ’

A fire burnt in him, and it made him one of the two most formidable antagonists Everest has ever had. He was absolutely determined to conquer the mountain, and no one knows better than I do how, for several months this year, he devoted his whole mind and will to this object.

At the same time those who suggest that he may have taken chances to achieve success in his last climb misrepresent him. For equally strong as his will to conquer was his sense of responsibility as leader of a party, and I know that he was prepared—nay, determined—to turn back, however near the summit, if it could not be reached in time to return in safety.

To his organising power, his remarkable gift of concentration, his genius for detail, and his true appreciation of the task before us, we owed this year much of our plans and much of our organisation on the mountain.

In the mess he afforded a marked contrast to what he was when actively employed: his temperament was singularly æsthetic and cultured for such a man of action. Impatient by nature, time had taught him a great patience, and this was one of the things that made it so pleasant to work and plan with him.

Such was Mallory. His death leaves us the poorer by a loyal friend, a great mountaineer, and a gallant gentleman.

Irvine was once referred to by General Bruce as ‘ our experiment,’ for he was young—twelve years younger than the average age of the party—his mountaineering experience was limited, and he departed from what we considered the true Everest type in being big and strong rather than light and limber.

It did not take him long to justify the experiment. If he was young he was a man full grown mentally and physically, and at once took his place with all modesty on equal terms with the rest; if he was an inexperienced climber he proved one of the fastest of us, and I believe, though I never actually climbed with him, as sure and safe as any. If he was on the heavy side, he was strong and active to a degree.

Mechanically he was a genius : from a broken camp chair to the more complicated valves of the oxygen apparatus, nothing came amiss to him. His tent daily assumed the aspect of a fitter's shop ; here, until late at night, he would be found hard at work on the oxygen apparatus or doing some job for a friend who had long been tucked into his warm blankets.

He was always the willing horse.

Selected to take part in the first attempt with oxygen, he was, in our revised plans, relegated to a later attempt, giving place to others who were to try first without oxygen ; as a result he, with Odell, became a supporter on the North Col. He never even hinted at disappointment, but tackled with unselfish energy and his usual enthusiasm the part of cook, or scullion, or nurse to a cripple.

That Irvine was loved by all of us for his cheery unselfishness, his *camaraderie* and his manly qualities goes without saying. It is, perhaps, more significant that he was loved by the porters, not a word of whose language could he speak.

Together these two went up the mountain for the last time : higher than ever man has been before they were last seen—one giving a hand to the other, and then—they were seen no more.

Could either have wished for a better friend to hold his hand at the crossing into the unknown land beyond ?

THE JOURNEY THROUGH TIBET AND THE ESTABLISHMENT OF THE HIGH CAMPS.

BY CAPTAIN GEOFFREY BRUCE, 6TH GURKHAS.

The route taken this year across Tibet was almost identical with that of 1922. The uplands between Phari and Khamba Dzong, particularly the Dongkar-La, were as usual bleak and cold, but with the experience of 1922 behind us we were able to travel in far greater comfort than before. The baggage train consisted again of over 350 animals—yaks, donkeys, and bullocks—changed at each dzong (capital of a district) along our route. This year we had very little difficulty over transport arrangements. Several of the Jongpens we already knew. One and all seemed pleased to see us and to do what they could to help us on our way.

From Khamba Dzong onwards there were no hardships or difficulties to speak of. Evenings, on arrival in camp, were

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From Khamba Dzong onwards there were no hardships or difficulties to speak of. Evenings, on arrival in camp, were

generally spent in oxygen drills, conferences about plans of climbing the mountain, and so on. Beetham was very unlucky in suffering from an attack of dysentery in the early part of the march, but he refused to give in, and by the time we reached the Base Camp he had almost got over it.

On April 23 the Expedition arrived at Shekar Dzong. Our old friend, the Jongpen, rode out to meet us, and it was at once obvious that he was ready to give us every assistance. Everest itself lies in his district, and it was a very great comfort to know that we had this capable and straightforward man to deal with. Our two days' stay there was busily spent in arranging with the Jongpen for grain, meat, and fuel to be regularly supplied to the Base Camp during the next two months. He also gave us much personal help in collecting coolies to be used on the glacier in addition to our own specially enlisted porters. These coolies will be mentioned again. Four days later (April 28) we camped at the Rongbuk Monastery, only five miles from the site of our Base Camp. Unfortunately, the Lama was ill and unable to see us or bless the porters as he did on our way through in 1922. We sent the interpreter to him with messages and presents—among the latter a yak-load of cement, which he had specially asked for in 1922 for repair work to his monastery.

The following day we came to the end of the four and a half weeks' trek from Darjeeling, having experienced no really unpleasant weather the whole time. But conditions at the Base Camp were quite different. We arrived with snow falling and a bitterly cold wind. We were soon into all the warm clothing we possessed, and then buckled to the task of establishing the camp and sorting out stores and equipment ready to push up the glacier on the morrow. It had been decided to reoccupy the old sites of Nos. I., II. and III. Camps, and to have them established for the first attempt on the summit to take place on May 17. The position and heights of the camps were roughly :

Base Camp, 16,500 feet.

No. I. Camp, at the junction of the Main Rongbuk and East Rongbuk Glaciers, 17,800 feet.

No. II. Camp, half-way up the East Rongbuk Glacier, 19,800 feet.

No. III. Camp, on the snowfield at the head of the East Rongbuk Glacier close under the North Peak, 21,000 feet.

Following this, Odell and Hazard were to reconnoitre and construct the route up the North Col. Odell and I were to establish Camp V. and return; then two simultaneous attempts should start for the summit, made by Norton and Somervell (without oxygen) and by Mallory and Irvine (using oxygen). To this end the tentage, rations, and equipment intended for each camp were selected and put into separate dumps on arrival at the Base, and the four Gurkha N.C.O.'s were entrusted with the important task of establishing Camps I. and II. and, in addition, putting into Camp II. all the loads required for Camps III. and IV., and the high camps on the mountain itself. In order to meet this big demand on portage and to save our own men we had, through the good offices of the Shekar Jongpen, started to collect local coolies at Shekar, and continued recruiting them between there and the Rongbuk Monastery. We now had at the Base Camp over 150 of them ready to begin work at once. Their terms were: pay at the rate of four tankas (about one shilling) a day and some rations. They were not to be employed on snow or ice, and requested to be quickly released when the work was done as they had the sowing of their fields to attend to. They undertook to look after themselves as regards tentage and extra blankets, but, as a matter of fact, they scorned the use of either.

On April 30, under better weather conditions, a convoy of 151 Tibetans under three Gurkha N.C.O.'s left the Base Camp for Camp I. Half the Tibetans were to remain in Camp I. and carry up to Camp II. on the next day, while the remainder were to leave their loads in Camp I. and return to the Base Camp for the night. On the following morning we were greeted with the news that of the 75 local coolies at the Base Camp 52 had deserted in the night. This was a very serious matter, and we feared that the Gurkha N.C.O.'s at Camp I. might be experiencing similar trouble. A transport strike at this juncture would effectively cripple our detailed programme, so Norton, Shebbeare, and I went up at once to Camp I. to see how they were faring. We were greatly relieved to find that there was no sign of discontent among the Tibetans, and that the N.C.O.'s had everything well in hand and running smoothly. While we were there the first convoy from Camp I. to Camp II. was just returning. It consisted of men and women. We sat them down in lines and gave them extra rations and a promise of a rise in pay if they completed the establishment of Camp II. by the following evening. They were delighted and showed no inclination to be off home. One of these coolies—quite an

elderly woman with grey hair—actually danced a *pas seul*, although she had just carried a 40-lb. load to Camp II. over rough and difficult ground. Another woman—a mother—had insisted on carrying her lusty baby all the way on the top of her already full load, and now came into camp fresh and smiling. What was more, she and all the others were prepared to sleep again in Camp I., with no tent accommodation or extra blankets, and repeat the performance next day.

No more desertions occurred, and by the evening of May 2 we received a message from the Gurkha N.C.O.'s at Camp II. saying that Camps I. and II. were fully stocked as ordered. In these three days over 180 loads were put into Camp II. That evening all the local coolies were given a large feed and paid off, after which they set off towards Rongbuk in high spirits.

In the meantime our own Porters Corps was organised for work higher up into two parties of twenty each and a reserve of twelve. Briefly, they were to be utilised as follows: No. 1 Party were to go through with some of the climbers to Camp III., establish it, and remain based there for getting the next camp on to the North Col. A day later No. 2 Party were to move into Camp II. for the purpose of working between II. and III. The reserve were to remain for the time being at the Base Camp. The Gurkha N.C.O.'s were to be in charge of the three camps to see to the feeding and welfare of every one in them, and to supervise the arrivals and departures of convoys.

The weather had now improved a little, but it was mainly cold and stormy, and the conditions on the mountain looked forbidding. Nevertheless we were able to go forward with the plan. On May 3 Mallory, Odell, Hazard, and Irvine left the Base Camp with No. 1 Party. No. 2 Party started on the 4th under one of the N.C.O.'s; and Norton, Somervell, and Beetham on the 6th. I followed with the reserve party on the 7th, while Shebbeare remained in charge at the Base.

Our good luck was not destined to last long. To begin with, poor Beetham, having recovered from his dysentery, now succumbed to a crippling attack of sciatica which finally prevented him getting on to the mountain at all. I reached Camp II. on May 8. There things were far from happy. Most of the No. 1 Party of porters had been unable to remain in Camp III., chiefly owing to the failure of No. 2 Party to carry their loads the whole distance from Camp II. to Camp III. Instead they had made a dump on the glacier below Camp III., and the men in Camp III. did not receive their extra blankets or rations and suffered terribly.

Mallory came down from Camp III. to see Norton, and explained that there had been a temperature of -22° F. the first night there and very low temperature the next night. The men were all complaining of hardships and looked crest-fallen and weary. The situation was a difficult one, and it was fully realised that the *moral* of the porters must at all costs be raised. The first step was to send for Shebbeare to come up to Camp II. and take charge. It was essential that there should be an officer at this camp who could speak the language and ensure the safe arrival of convoys into Camp III.

It is worthy of note that from the moment Shebbeare came up and established himself as king of No. II. nothing ever again went wrong on the lines of communication.

In the meantime Somervell with a few men of the No. 2 Party got off to relieve the food situation at Camp III. The rest of the day was spent by Norton and Mallory in revising the plan, while I endeavoured to put some heart into the men. On the whole the results were good, for on the following morning Norton, Mallory and I with a convoy of twenty-six porters left for Camp III.

The route over the glacier was somewhat changed from 1922, for instead of crossing the trough we followed along it for quite a distance. Here the scenery was wonderful, but one was in no mood to enjoy it. This part of the glacier is within the 'gates of altitude,' and in addition produces a special brand of lassitude which saps one's energy and enthusiasm for anything. Fantastic blue pinnacles surrounded us like a forest—some of them gigantic when we entered the trough, getting smaller as we emerged on to the glacier itself. The glacier surface consisted of absolutely smooth ice, varied by depressions and cracks of powdery snow. Snow began to fall shortly after we left Camp II. It continued to fall all day, getting heavier and heavier and finally assuming the proportions of a real blizzard, which was to last for forty-eight hours. The porters at Camp III. were wretched; the cold was getting at them badly. Many became so apathetic that they would not even attempt to cook food for themselves, although I pushed Primus stoves and oil inside their tents for them.

Wind and snow continued that night with unabating violence; the snow drifted into our tents to a depth of an inch or two, making everything miserably uncomfortable. Morning came and the snow stopped falling, but fallen snow was being hurled along the surface of the glacier by the wind, producing the same effect as a blizzard. Kami, our cook, rose manfully to the

occasion, and produced for breakfast, at about 10 A.M., an unrecognisable mess in a Primus stove, followed an hour later by extremely unpalatable tea, which had been brewed in the same greasy pot. Still, it was hot and comforting, and we shall always be grateful to the faithful Kami.

We then reviewed the situation, and it was decided that Mallory and Irvine should move down to Camp II. as a temporary measure and prepare for the possibility of evacuating altogether should the same weather continue. A message was also sent to stop Noel coming up with his kinema outfit, with which he subsequently obtained remarkable results. During the day Norton and Somervell did an excellent piece of work in braving the blizzard and getting down to the dump with seventeen porters and bringing up nineteen loads. As evening came on the wind blew still harder in tremendous gusts from every direction; the tents were again filled with snow, and the temperature fell to 39° below freezing-point.

Now there was no other course left but the evacuation of the whole line. The porters were in a bad way, the climbers were by no means improving, and in any case the North Col route would have been impracticable for several days. But to evacuate Camp III. was no easy matter, for the porters were all huddled up in their tents, having lost the will to move or even cook for themselves. After compelling them to cook and eat, we turned them out and struck camp, leaving tents, stores, and fuel piled in some kind of order.

Then we took to what Colonel Norton has described as 'Via Dolorosa,' first the wind-swept glacier down to Camp II., then the rough miles of the tumbled moraine; withdrawing every man to the Base Camp with a melancholy procession of snow-blind, sick, and frostbitten men being shepherded down by their comrades. But we knew that everything was ready for us to return up the glacier, and only a small amount of high-altitude stores remained to complete Camp III. for the first attempt.

How had we all stood Round 1? The British members were in good health and full of optimism. They had all acclimatised themselves up to 21,000 feet. Further, a strong reinforcement had arrived in the shape of Hingston. He had left General Bruce in Gangtok and hastened across Tibet to rejoin us. He was in the nick of time to relieve Somervell of the heavy duties of medical officer. In the Himalayan ranks we were not so fortunate. One man was severely frostbitten in both feet and subsequently died. One man had broken his leg; several had bad attacks of bronchitis, and, worst of all,



SLOPES BELOW THE N. COL.

the Gurkha N.C.O. Shamsheer was in a very serious condition with hæmorrhage on the brain. After twenty-four hours' unconsciousness he died while being carried on a stretcher into the Base Camp. He was a very great loss to the Expedition, and to his regiment, where he undoubtedly had before him a brilliant career.

The weather had by now improved, and after even one day's rest at the Base Camp the men were beginning to look their normal cheery selves again. They were all very keen to pay a visit to the Rongbuk Monastery, five miles down the glacier, and receive the blessing of the Holy Lama, who had now recovered. This was duly arranged to take place on May 15, and was an unqualified success. The Lama conducted an impressive service and sent them away happy and full of courage for further efforts. That evening in the Base Camp the interpreter Karma Paul—a rather vain youth and apt to be a little carried away by his own self-importance—announced that the porters were very pleased that the interpreter and the Colonel Sahib (note the order) had arranged such a good show for them. A feature of the Base Camp about this time was a herd of burhel (wild sheep) which came grazing the scanty tufts of grass right down to our tents.

The Lama's blessings had apparently worked wonders with the weather and the men, so after sundry pieces of reorganisation the advance was resumed, and by May 19 Camp III. was reoccupied. Round 2 had now begun, and was remarkable for the spirit of team work displayed by everybody and the excellent comradeship which existed through all ranks of the Expedition.

On May 20 Norton, Mallory, Somervell, and Odell left Camp III. to reconnoitre the route up to the North Col—that dangerous wall of ice, like a trap set at the foot of the mountain. Just below the slopes it became evident that Somervell was far from fit, and he had reluctantly to return to camp. He told me afterwards that he had taken his temperature the night before and found it to be 104°. It was little short of marvellous how he managed to start at all in the morning. Mallory, too, was suffering from a bad cough, and only his great heart carried him on. However, they succeeded in working out a new route right up to the No. IV. Camp site, designed to be safe from avalanches and satisfactory except for an ice chimney 150 feet high. The old route looked very unsafe and certain to avalanche. They did a fine day's work and returned to Camp III. that evening.

On May 21 morning broke warm with a lot of cloud about. Light, dry snow kept falling at intervals. This day the North Col Camp was to be established. Somervell, Hazard, and Irvine got off at 8.30 A.M., with twelve porters, their plan being that Somervell and Irvine should return to Camp III. while Hazard remained in IV. till the next day, when Odell and I would arrive there, stay the night, and then proceed to establish Camp V. At 1 P.M. it began to snow in earnest—very soft, wet snow—and nothing could be seen of the North Col from Camp III. At 6.30 P.M. Somervell and Irvine returned, having left Hazard and his twelve men within easy reach of Camp IV. They told us that they had found the ice chimney too narrow for the majority of loads. Somervell and Irvine had established themselves at the top while Hazard directed operations from below, and all twelve loads were hauled up by rope. It was a tremendous effort, and over two hours were thus spent.

But Fortune had again ceased to smile on us. Snow fell all night and all the following day until 3 P.M. It was quite impossible to do anything but lie in our sleeping-sacks and hope for the best. That night (May 22) the temperature fell to 56° of frost—the coldest ever recorded in an Everest expedition. The morning of May 23 was, however, an improvement—a cloudless, brilliant day. The wind had dropped, but the air was keen and cold. Odell and I got off at 9.30 with seventeen porters bound for Camp IV. The mountain towered above us, sharp and clear in every detail. The party was going well and all were in good spirits. At one of the frequent short halts on the glacier the men were discussing the mountain and saying how easy it looked to climb. They asked me whether they would be allowed to go to the top or whether it would be climbed by Sahibs only. Again we were frustrated, for shortly after midday snow started to fall. Instead of a brief hour's walk to the foot of the Col three hours were required. The slopes of the Col were in a dangerous condition, and we deemed it unsafe to take laden porters on. Accordingly we made a dump at the farthest point reached and retreated to Camp III.

At about 5 P.M. Hazard arrived, but with only eight of his party. While he had gone ahead piloting his men along the steep traverse at the top of the Col, four of them had lost their nerve and remained there marooned. This was a terrible situation, especially as it transpired that a load of mixed porters' rations for Camp IV. had been accidentally dropped over an ice cliff and the marooned party had nothing but



APPROACH TO N. COL



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barley meal to eat. Further, conditions all seemed to point to a real monsoon current. Norton therefore decided that while the rest of us were to evacuate Camp III. and get the men back to lower camps, he, Mallory and Somervell were to tackle the arduous and dangerous work of rescuing the four marooned men. Were men ever faced with such a task? They were themselves far below par, from previous exertions and hardship, Mallory's cough and Somervell's throat being really bad. Their chances of being avalanched were considerable. What if they failed to bring off the rescue? What would they do if they found some of the marooned frostbitten and unable to move? The Sherpa porter is very superstitious. These men might by now have gone off their heads with fright and hurled themselves down the ice-slopes. The porters told me some days later that during their night on the North Col they had distinctly heard the fierce barking of the watch-dogs, guarding the Goddess' abode.

The rescue party can have slept little, thinking over what lay before them and listening to the soft snow falling and lessening their chances of success. They started from Camp III. about 7.30 next morning, going so badly that their hopes of accomplishing the rescue were very low. Up the Col they led in turns, and so came to the last traverse. This was covered with fresh snow, which looked as if it might avalanche at any moment. Somervell was now leading. Norton and Mallory belayed the rope and prepared to hold if Somervell slipped. The four marooned porters were waiting on the other side. It was doubtful whether the rope was long enough. Somervell cut steps all the way across, constantly stopping to lean his head on his arm and cough. He reached the end of the rope and found he was five to ten yards short of the goal. The men must cross to him—with no rope! The first came over safely and proceeded towards Norton and Mallory. Just as the second was joining Somervell the last two men slipped and began to slide towards certain death, but they miraculously pulled up in a few yards. Somervell was now superb, and perfectly cool. He told the two men to remain still whilst he passed the second man back along the rope, joking the while, so that one of the two men sitting shivering on the edge of the ice cliff actually gave a short bark of laughter. They sat like statues. Somervell then drove his axe in up to the head, pulled the rope tight, passed it round his axe, and so made enough rope to reach the men with one arm at full stretch, holding the very end of the rope with the other. He dragged

them up in turn by the scruff of the neck and passed them along to safety. It was a first-rate performance.

It was now 4.30 P.M. One man was badly frostbitten in the hands (he subsequently recovered) and two others slightly in feet and fingers. The men behaved splendidly on the way down, but the rescuers had their work cut out to bring them in. In the chimney, Norton held the full weight of the badly frostbitten man no less than four times, and Mallory and Somervell were, as usual, towers of strength. They reached Camp III. at 8 P.M. It was a gruelling day, but a triumphant success.

Meanwhile the second evacuation had taken place, the climbers being distributed at Camps I. and II. So ended Round 2.

We came to the conclusion that after all they had gone through only fifteen of our porters would be fit for further efforts at any great heights. These were collected in Camp I. and formed into a *corps d'élite*, and called the 'Tigers.' On the efforts of this little band our success now very largely depended. It may possibly be thought from this that the Porters Corps as a whole was a failure. Let there be no misunderstanding on this point. True, the majority had shot their bolt, but they had performed some stupendous feats of carrying, often on several successive days, and under terrible conditions. And as for the 'Tigers,' we never really got to the bottom of what they could do right up to the end.

On May 27 a council of war was held in Camp I., and from this point the story will be continued by Colonel Norton, our leader and the inspirer of all our efforts.

THE CLIMB WITH MR. SOMERVELL TO 28,000 FEET.

BY LIEUT.-COL. E. F. NORTON.

On our arrival at No. I. Camp after our second retreat, it was evident that we must recast our plans. For neither the very reduced number of dependable porters nor the time available before the threatened arrival of the monsoon justified any hopes of carrying out our full original programme.

Very briefly, the original plan was an attack on the summit by two parties of two on the same day—one with oxygen from a camp about 26,500 feet, one without from a camp about



COL. NORTON AND MR. SOMERVELL WITH THREE « TIGERS »

27,300 feet, the parties to act independently but to afford mutual support if necessary. In the event of failure the programme was to be repeated with necessary modifications by the remaining available climbers.

Our revised plan was settled after two days' discussion at No. I. Camp. In this nearly all the party took part. It was decided unanimously to scrap oxygen and to attack the mountain by a series of attempts starting from the North Col on successive fine days, each attempt to consist of two climbers with the irreducible minimum of equipment and porters.

Our decision to abandon the oxygen and to climb in parties of two was dictated by the following considerations :

As regards the oxygen : Firstly, neither the number of porters on whom we could now count even to reach the North Col, nor the time before the monsoon, which we expected any day, was sufficient to enable the necessary number of oxygen cylinders to be got up, for so far we had got only a few cylinders to a dump half-way up the slopes to the North Col ; secondly, the verdict of Odell and Bruce—the only ones so far to test the oxygen apparatus—was very pessimistic as to its effects.

As regards the parties of two : Firstly, there being only seven available climbers, the use of parties of three would have cut down the possible number of attempts to two, and it would have been almost impossible to arrange for these to be adequately supported ; secondly, each attempt would have required an extra tent besides other equipment and stores ; thirdly, two men climb more quickly than three.

In this connexion it must be remembered that the whole of Mt. Everest above the North Col is an easy rock peak.

The sequence of parties decided on was : 1st, Mallory and Bruce ; 2nd, Somervell and myself. Odell and Irvine were to be in support at No. IV. Camp and Hazard at No. III. Camp. The last three were to constitute a reserve for a third attempt.

On June 1 Mallory and Bruce started on their attempt from the North Col, where Odell and Irvine were already established. Somervell and I slept that night at No. IV. Camp. On June 2, the weather being still fine, we two started at 6.30 A.M. with six porters, who carried loads of 20 lbs. or slightly less, for No. V. Camp, which Mallory and Bruce had presumably established the day before.

No. IV. Camp lay some 200 yards north of the actual Col, to reach which it was necessary to cross a confused jumble of ice and snow cut up by crevasses. Hence you emerge on to the Col and traverse it just below its crest on the farther (or western)

side. At this point we suddenly found ourselves in shadow and exposed to the full force of the west wind, which blighted us as the first frost of winter blights the dahlias.

The whole of this day's climb and the next was so uneventful that there is little to say about it. We followed the blunt angle which roughly divides the north face of the mountain into two parts. This is known as the North Ridge, and connects the North Col with the North-East Shoulder.

The route was familiar to us from our experience of two years before. The going is all slabby limestone rock at a fairly steep angle, varied by frozen scree with occasional patches of snow, and is entirely without difficulty or danger. When descending it is possible, by deviating a few yards, to glissade down on good hard snow for the last 2000 feet above the North Col.

After climbing for some time we were much disconcerted to see Mallory, Bruce, and their porters descending to meet us. Their explanation was simple but conclusive. Apparently the wind on the previous day had completely taken the heart out of their porters, and this morning not even Bruce's influence and command of the language could induce them to go any higher.

This breakdown of the first party enabled us to reduce our porters to four, one of whom climbed unladen, as a reserve man.

No. V. Camp, where we spent the first night, was pitched a little on the eastern side of the ridge, and so was somewhat sheltered from the west wind. Here, on the morning of June 3, I had some difficulty in inducing three of our four porters to continue the ascent. Their condition had not been improved by the fact that two of them had been injured by a fall of stones, probably dislodged from the crumbling platform built up for our tent; one of these men had a nasty gash across the knee-cap.

I owe it to the three men who came up to the scratch that you should hear their names. They were Norbu Yshay, Llakpa Chedi, and Semchumbi, the last having the cut knee. All honour to a gallant man. He was lame for two months after.

No. VI. Camp was pitched in a cleft in the rock on the actual ridge, and we estimated its height at some 26,800 feet. Its position was dictated principally by Semchumbi's knee and the necessity for getting the porters down to No. IV. Camp in good time.

I have little doubt that, on a future occasion, some improvement could be made on the heights of both Nos. V. and VI. Camps; this is one of the factors on which I base my confidence in ultimate success.

At both Nos. V. and VI. Camps we spent the evening in the hateful routine of high-altitude cooking.

It sounds simple. While one member of the party fetches snow from a neighbouring snow-bed his companion gets the cooker going and opens tins of food—such as pemmican, sardines, biscuits, jam, sweets, and tea. More trips to the snow-bed follow to enable thermos flasks to be filled for to-morrow's breakfast and climb, and for washing up.

I can give you no better idea of the conditions in which one works at these altitudes than by telling you that these apparently simple operations are most exhausting and call for some determination.

We spent very fair nights at both high camps; in fact, I slept really well at No. VI. Camp, which proves that we had learnt something of how to make the best of a high camp since the time, two years before, when four of us spent what I might describe as a most unfair night at 25,000 feet.

The first entry in my diary for June 4 is 'Somervell pretty seedy with throat.' I have already mentioned this throat trouble; it was much aggravated at these heights by the repeated intake of cold, dry air catching the back of his throat.

He was handicapped by this throughout these three days. Late this same evening he very nearly choked, and was only saved by coughing up the obstructing matter along with a lot of blood. That he achieved what he did in this condition was a remarkable performance.

We started at 6.40 A.M., having been much delayed by the necessity of boiling snow for breakfast, for our thermos flask had got rid of its cork in the night, and shed its contents inside my sleeping-bag.

I have not much to say about the climb, and this not by reason of any dulling of the intellect or memory—for this is, I believe, a myth—but because there is so little to tell.

The weather was ideal, with singularly little wind. Even so, clad in two suits of windproof clothing and two sweaters, I found it very cold. Sitting in the sun I shivered so much that I once thought I had fever on me, and took my pulse. I was surprised to find it only some twenty above normal.

But against men in our condition the lack of oxygen was obstacle enough even in such favourable weather. Our pace was lamentably slow; on anything like a steep slope I consistently failed to realise my ambition of achieving twenty consecutive steps without pausing on forearm on bent knee, to puff and blow. Somervell's throat further slowed him down. We had to sit down and rest frequently.

So long as all went smoothly one achieved some degree of mechanical plodding, but trip or slip and the effort at recovery set one panting furiously to make up for the deficit of oxygen caused by the extra exertion. Step-cutting in the rare patches of hard snow was exhaustive work.

After a short distance on limestone scree and a few small snow-beds, we got on to the 1000-foot deep band of yellow sandstone which runs nearly horizontally across the whole face of the mountain. We traversed it diagonally, and headed for the base of the final pyramid, keeping below and roughly parallel to the crest of the north-east ridge all the way.

The going on this sandstone band was absolutely easy and almost devoid of snow until we approached the big couloir which cuts off the final pyramid from the great eastern shoulder of the mountain.

Here, at noon, Somervell finally succumbed to his throat trouble, and I went on alone.

I soon got on to much steeper rock as I turned a corner to enter the couloir. The slabs now were very narrow and sloping, like tiles on a roof; they were frequently covered with snow, which here was powdery like coarse salt and concealed without supporting. The general angle was steep enough to make a slip probably fatal.

I went very slowly and had more than once to retrace my steps and find another route; my rate of progress was also affected by the fact that I was beginning to see double—a premonitory symptom of snow-blindness, I suppose—with the result that by 1 o'clock I was but a short distance on the western or summit side of the big couloir, and perhaps 80 feet higher than where I left Somervell.

Here, in the shelter, the powdery snow was thickest, and I was confronted with a steep climb of some 200 feet before I could again traverse to the right and so gain the north face of the final pyramid and an easier gradient.

It was obvious I could not reach the summit in time to return in safety, and it was very doubtful if I had the strength to go so far in any case. So I turned back and rejoined Somervell by 2 P.M.

The view from the highest point we reached was, to me, disappointing, as is often the view from an aeroplane, for one looked down on all the surrounding mountains and the beauty of their outline was lost. It was a remarkably clear day, and one could detect snow peaks dimly appearing over the northern horizon like little teeth. They must have been hundreds of miles away.

The descent was uneventful for me, but very painful for Somervell. Nightfall found us on the big snow-bed a little below No. V. Camp, and the electric torch came into use; perhaps an hour later I succeeded in making myself heard at No. IV. Camp, whence we soon saw a light coming to meet us, and a voice shouted that they were bringing an oxygen cylinder.

I shouted in reply again and again, 'We don't want the d—d oxygen; we want drink.' My own throat was not at its best, and I remember how feeble sounded my querulous wail, 'We want drink, we want drink,' losing itself in that vast waste of snow and ice glimmering under the stars.

Odell and Mallory met us well above the North Col, and by 9.30 had escorted us into No. IV. Camp, where Irvine was brewing drink for dear life.

As we lay in our sleeping-bags that night Mallory told me how he had organised a new attempt with oxygen. He and Bruce had been down to No. III. Camp to try to collect sufficient porters for an attempt on a minimum scale. This they had done by making use of some of the men who had already been to No. V. Camp with them, supplemented by three or four others whom the continuance of fine-weather conditions had brought up to the scratch.

Mallory had arranged for Irvine to accompany him, and was prepared to start the next day but one. It will be remembered that Geoffrey Bruce was *hors de combat*. I was entirely in favour of the plan, which now represented our last chance of success.

The following morning I was snow-blind, and took no further part in active operations. So I now leave Odell to tell the story of the final stage in which he played so notable a part.

THE LAST CLIMB.

By N. E. ODELL.

Norton has described only too modestly his and Somervell's remarkable attempt on the summit and their return to the North Col on June 4, the same day that Mallory and Irvine had come up from Camp III. The latter had climbed the 2000 ft. from Camp. III. to IV. in the fast time of $2\frac{1}{2}$ hours, evidently in an endeavour to prove to themselves the efficacy

of oxygen. June 5 was spent resting at the North Col Camp, Irvine and I meanwhile re-testing and putting final touches to the oxygen apparatus.

A few words concerning the nature of Camp IV. and its surroundings may here be applicable. Perched on an ice-ledge in roughly the same position as the camp of 1922, it consisted of four tents. A high wall of ice, rising from the ledge on the western side, gave comforting protection from the prevailing chilling winds from that direction. The ledge was broad enough and long enough to allow comfortable movement all around the tents and leave an ample margin of clean snow for water-supply—a point that concerned me as camp cook. During my period of eleven days' residence there I experienced all kinds of weather conditions, not the least remarkable being two days when the sun-temperature at midday was 105° F., while the air-temperature at the same time was only 29°. I shall never forget some of the sunrise effects over the distant sea of peaks to the east, Chomolönzo and Makalu standing supreme among them.

In order to reach the actual saddle of the North Col and the foot of the North Ridge of Mt. Everest it had been necessary in 1922 to make a way from the camp-ledge up towards the North Peak, and then back again along the crest of the col. On the occasion of our first reaching the site of IV. on May 20, Mallory and I had forced a rather complicated route from the southern end of the ledge direct up to the col. This route, though a little treacherous from two doubtful snow-bridges, proved to be negotiable until the end.

At 8.40 on the morning of June 6, in brilliant weather, Mallory and Irvine left the North Col Camp for Camp V. They took with them five porters carrying provisions and reserve oxygen cylinders. They used oxygen, and, in the opinion of the porters, travelled well. On June 7, when they were going from Camp V. to VI., I went up in support to Camp V. with the one porter that was available. Soon after my arrival Mallory's four porters arrived from VI., bringing me a message which said that they had used but little oxygen to 27,000 ft., that the weather promised to be perfect for the morrow's climb, and mentioning he was sorry the cooking-stove had rolled down the mountain side just as they were leaving Camp V.—an occurrence which meant a cold supper and breakfast for me! As Nema, my porter, was suffering from mountain sickness, I sent him down with the four others to the North Col, and having the tent to myself, and a couple



CAMP ON N. COL

of sleeping-bags, I kept sufficiently warm to sleep well that night.

Next morning broke clear and not unduly cold. After a breakfast of 'Force' and a little macaroni and tomatoes, I started my solitary climb to Camp VI., taking with me provisions for that camp in case of need. My plan was to make a rather circuitous route out on to the north face in order to examine the structure of the mountain. Mist soon began to form, and although the wind remained light I found myself immersed now and then in squalls of sleet and light snow. By the glow of light above me I could sometimes see that I was experiencing worse conditions than quite probably Mallory and Irvine were at their higher altitude.

At an altitude of about 25,500 ft. I came upon a limestone band which to my joy contained fossils—the first definite forms found on Everest. I might very briefly refer here to the structure of Everest and its bearing on the problem of climbing it. The lower part of the mountain is formed of a variety of gneisses, and on these rests a mass of rocks, mainly altered limestones, which compose the greater part of its upper half. Here and there have been intruded granitoid rocks, but these are relatively little in amount. The general dip of the series is about 30° northward, and since the slope of this face of the mountain above 25,000 ft. is about 40° to 45°, the effect is to make a series of overlapping slabs nearly parallel with the slope and presenting a number of little cliff faces often up to 50 ft. in height. Trying enough for upward progress, these slabs are often sprinkled to a varying depth with debris from above, and when to this is added freshly fallen snow, the labour and toil of climbing at these altitudes may perhaps be imagined. It is not the technical difficulty so much as the awkwardness of a slope usually not quite steep enough for the use of one's hands.

At about 26,000 ft. I climbed a little crag, which could possibly have been circumvented, but which I decided to tackle direct, more perhaps as a test of my condition than for any other reason. There was, perhaps, 100 ft. of it, and as I reached the top there was a sudden clearing above me and I saw the whole summit ridge and final peak of Everest unveiled. I noticed far away on a snow-slope leading up to the last step but one from the base of the final pyramid a tiny object moving and approaching the rock step. A second object followed, and then the first climbed to the top of the step. As I stood intently watching this dramatic appearance,

of sleeping-bags, I kept sufficiently warm to sleep well that night.

Next morning broke clear and not unduly cold. After a breakfast of 'Force' and a little macaroni and tomatoes, I started my solitary climb to Camp VI., taking with me provisions for that camp in case of need. My plan was to make a rather circuitous route out on to the north face in order to examine the structure of the mountain. Mist soon began to form, and although the wind remained light I found myself immersed now and then in squalls of sleet and light snow. By the glow of light above me I could sometimes see that I was experiencing worse conditions than quite probably Mallory and Irvine were at their higher altitude.

At an altitude of about 25,500 ft. I came upon a limestone band which to my joy contained fossils—the first definite forms found on Everest. I might very briefly refer here to the structure of Everest and its bearing on the problem of climbing it. The lower part of the mountain is formed of a variety of gneisses, and on these rests a mass of rocks, mainly altered limestones, which compose the greater part of its upper half. Here and there have been intruded granitoid rocks, but these are relatively little in amount. The general dip of the series is about 30° northward, and since the slope of this face of the mountain above 25,000 ft. is about 40° to 45°, the effect is to make a series of overlapping slabs nearly parallel with the slope and presenting a number of little cliff faces often up to 50 ft. in height. Trying enough for upward progress, these slabs are often sprinkled to a varying depth with debris from above, and when to this is added freshly fallen snow, the labour and toil of climbing at these altitudes may perhaps be imagined. It is not the technical difficulty so much as the awkwardness of a slope usually not quite steep enough for the use of one's hands.

At about 26,000 ft. I climbed a little crag, which could possibly have been circumvented, but which I decided to tackle direct, more perhaps as a test of my condition than for any other reason. There was, perhaps, 100 ft. of it, and as I reached the top there was a sudden clearing above me and I saw the whole summit ridge and final peak of Everest unveiled. I noticed far away on a snow-slope leading up to the last step but one from the base of the final pyramid a tiny object moving and approaching the rock step. A second object followed, and then the first climbed to the top of the step. As I stood intently watching this dramatic appearance,

the scene became enveloped in cloud, and I could not actually be certain that I saw the second figure join the first. I was surprised, above all, to see them so late as this, namely, 12.50, at a point that, according to Mallory's schedule, should have been reached by 10 A.M. at latest. I could see that they were moving expeditiously, as if endeavouring to make up for lost time. True they were moving one at a time over what was apparently but moderately difficult ground, but one cannot definitely conclude from this that they were roped—an important consideration in any estimate of what befell them. I had seen that there was a considerable quantity of new snow covering some of the upper rocks near the summit ridge, and this may well have caused delay in the ascent. Burdened as they undoubtedly were with the oxygen apparatus, these snow-covered, debris-sprinkled slabs may have given much trouble. The oxygen apparatus itself may have needed repair or readjustment either before or after they left Camp VI., and so have delayed them. Or both these factors may have been operative.

I continued my way up to Camp VI., and on arrival there, about 2 o'clock, a rather severer blizzard set in and the wind increased. After a short rest I realised it was just possible that, balked by earlier bad weather higher up, Mallory and Irvine might be returning, and the concealed position of Camp VI. would be almost impossible to discover in the blizzard. I remembered also that Mallory had told me in his note that he had left his compass at V., and asked me to retrieve it. So I went out in the direction of the summit, and having scrambled up about 200 ft. and jodelled and whistled meanwhile, in case they happened to be within hearing, I then took shelter for a while behind a rock from the driving sleet. After about an hour's wait, realising that the chances were altogether against their being within call, I found my way back to the tent. As I reached it the storm, which had lasted not more than two hours, blew over and the whole north face of the mountain became bathed in sunshine. The upper crags were visible, but I could see no signs of the party. The little tent at Camp VI. was only just large enough for two, and if I had remained and they had returned, one of us would have had to sleep outside in the open—an altogether hazardous expedient. But apart from this, Mallory had particularly requested me in his last note to return to the North Col, as he specially wished to reach there himself after their climb. Leaving Camp VI., therefore, about 4.30, and going down the North Ridge in quick

time, I took to the hard snow near Camp V. and glissaded down to the North Col, reaching the camp at 6.45. That night Hazard's brew of Maggi soup, made from a mixture of at least six varieties, went down really well! I was surprised, though, to find that I was not suffering from thirst—that bugbear of Everest—to anything like the extent I had expected.

We watched till late that night for some signs of Mallory and Irvine's return, or even an indication by flare of distress. Next morning we scrutinised through field-glasses the tiny tents of Camps V. and VI., far up above us, in case they had returned late and had not yet started down. But no movement at all could be seen. At noon I decided to go up to Camp V. and on to VI. next day in search, and I arranged a code of signals with Hazard, who remained at the North Col. Two porters came with me and stayed the night at V., but in the morning I had to send them back to the North Col on account of indisposition. It was a bitterly cold night, and we slept little, if at all. Using oxygen, I started off from Camp V., and when within an hour or so of VI. I came to the conclusion that I was deriving but little benefit from the oxygen, which I had only been taking in moderate quantities from the single cylinder that I carried. I switched it off, and experienced none of the feelings of collapse and faintness that one had been led to believe ought to result. On reaching the tent at VI. I found everything as I had left it: the tent had obviously not been touched since I was there two days previously. I dumped the oxygen apparatus and went in search up along the probable route that Mallory and Irvine had taken. There was a bitterly cold west wind, and now and then I had to take shelter behind rocks to restore warmth. After a couple of hours' search I realised that the chances of finding the missing ones were indeed small on such a vast expanse of crags and broken slabs, and that for any more extensive search towards the final pyramid a further party would have to be organised. I returned only too reluctantly to the tent, and then with considerable exertion dragged the two sleeping-bags up to a precipitous snow patch plastrade on the little crag above the tent. With these sleeping-bags placed against the snow I had arranged with Hazard to signal down to the North Col Camp the results of my search. It needed all my efforts to cut steps out over the snow-slope and then fix the sleeping-bags in position, so boisterous was the wind. But fortunately the signal was seen 4000 ft. below, though the answering signal I could not make out. Closing up the tent and leaving its

contents as my friends had left them, I glanced up at the mighty summit above me. It seemed to look down with cold indifference on me, mere puny man, and howl derision in wind-gusts at my petition to yield up its secret, this mystery of my friends. If it were indeed the sacred ground of Chomolungma, Goddess Mother of the Mountains, had we violated it?—was I now violating it? And yet, as I gazed again, there seemed to be something alluring in that towering presence. I was almost fascinated. I realised that no mere mountaineer alone could but be fascinated; that he who approaches close must ever be led on and, oblivious of all obstacles, seek to reach that most sacred and highest place of all. It seemed • that my friends must have been thus enchanted also: for why else should they tarry? In an effort to suppress my feelings, I turned my gaze downwards to the North Col far below, and I remembered that other of my companions would be anxiously awaiting my return, eager to hear what tidings I carried. Alone and in meditation I slowly commenced my long descent. But it was no place for silent contemplation, for, buffeted by storm-blasts that seemed to pierce one through, it needed all one's attention and calculation to negotiate safely the exposed slabs of the ridge and prevent a slip on their debris-sprinkled surfaces. I quickened my pace lower down, but at times found it necessary to seek protection from the biting gale behind rocks and reassure myself that no symptoms of frost-bite were imminent. Hazard had seen me coming and sent his one remaining Sherpa to meet and welcome me at the foot of the ridge. Arrived at the North Col Camp, I was pleased to find a note from Norton and to discover that I had anticipated his wishes that I should return to IV. and not prolong my search on the mountain, seeing that the monsoon seemed likely to break at any moment. Next day Hazard, the porter, and myself, leaving the tents standing, evacuated the North Col Camp and went down in good weather to Camp III., and later in the day with Hingston and Shebbeare to II., reaching the Base Camp on the 12th.

I have already mentioned the possible reasons why Mallory and Irvine were so late in reaching the point at which they were last seen—namely, an altitude which Hazard later determined by theodolite to be about 28,230 ft.—and I must now very briefly speculate on the probable causes of their failure to return. They had about 800 ft. of altitude to surmount to reach the top, and, provided no particularly difficult obstacle presented itself on the final pyramid, they should have got there

about 3 to 3.30. This would be three or four hours late on Mallory's schedule, and hence they would find it almost impossible to reach Camp VI. before nightfall, allowing five or six hours for the return. But at the same time it must be remembered there was a moon, though it rose rather late, and that evening it was fine and the mountain clear of mist, as far as could be seen. In spite of this they may have missed the way and failed to find Camp VI., and in their overwrought condition sought shelter till daylight—a danger that Mallory, experienced mountaineer that he was, would be only too well aware of, but find himself powerless to resist: sleep at that altitude and in that degree of cold would almost certainly prove fatal.

The other possibility is that they met their death by falling. This implies that they were roped together, which need not necessarily be inferred from their observed movements when last seen. It is difficult for one who knew the skill and experience of George Mallory on all kinds and conditions of mountain ground to believe that he fell. Of Sandy Irvine it can be said that, though altogether less experienced than Mallory, he had shown himself to be a natural adept and able to move safely and easily on rock and ice. Such had been my experience of him in Spitsbergen, in Norway, and on our home mountains. They were hampered, of course, by the oxygen apparatus—a very serious load for climbing with, as Mallory had mentioned in his last note to me. But could such a pair fall, and where, technically, the climbing appeared so easy? Experts nevertheless, I fear to remind you, have done so, under stress of circumstances or exhaustion.

It has been suggested that the oxygen apparatus failed and thereby rendered them powerless to return. I cannot accept the validity of this argument; for, from my own personal experience, being deprived of oxygen, at any rate when one has not been using it freely, does not prevent one from continuing, and least of all from getting down off the mountain. Mallory in his last note to me said they were using little oxygen, and they hoped to take only two cylinders each from Camp VI.

Hence I incline to the view first expressed, that they met their death by being benighted. I know that Mallory had stated he would take no risks in any attempt on the final peak; but in action the desire to overcome, the craving for victory, may have proved too strong for him. The knowledge of his own proved powers of endurance and those of his companion may have urged him to make a bold bid for the summit. Who

of us that has wrestled with some Alpine giant, in the teeth of a gale or in a race with the darkness, could hold back when such a victory, such a triumph of human endeavour, was within our grasp?

The question remains: 'Has Mt. Everest been climbed?' It must be left unanswered, for there is no direct evidence. But bearing in mind all the circumstances that I have set out above, and considering their position when last seen, I think there is a strong probability that Mallory and Irvine succeeded. At that I must leave it.

A word in regard to the oxygen and the benefit derivable from it. I think that its importance has been exaggerated, and provided one has acclimatised at a sufficiently high altitude, say 22,000 or 23,000 ft., one can do practically as well without it. I am prepared to go further and claim that oxygen used liberally may be regarded as a source of danger, preventing the user from proper acclimatisation and greatly increasing the chances of his collapse if the apparatus break down. My own experience with the present apparatus is that its weight of about 30 lbs., combined with its bulk, quite obviates any advantage to be gained from it. It is interesting in this connexion to compare Geoffrey Bruce's opinion in 1922 with his experience of it this year. I believe I am right in saying that he found he derived altogether less benefit from it this year than he expected he would. And this I feel sure was largely due to his higher degree of acclimatisation. An interesting physiological point is that all members of the Expedition who had been out previously acclimatised quicker than the newcomers. Finally, I consider that if oxygen be used by a high-climbing party in the future, if only in small quantities or as an emergency measure, it must be carried in an altogether lighter apparatus. Whether it be available in the gaseous state as at present, or can be carried in the much more convenient form of a liquid, is a matter for immediate research. But my firm belief is that Everest can be climbed without oxygen.

MEMORIAL SERVICES IN MEMORY OF THE MEN KILLED
ON MT. EVEREST.

A Service in memory of George Herbert Leigh Mallory and Andrew Comyn Irvine was held at St. Paul's Cathedral on October 17. Besides their relations and close friends, representatives of the King, the Prince of Wales, the Duke of York, the Duke of Connaught and Prince Arthur of Connaught, it was attended by members of the previous Everest expeditions, of the Alpine Club, and of the R.G.S.

The following address was delivered by the Right Reverend Henry Luke Paget, D.D., Lord Bishop of Chester:

Ps. lxxxiv. 5: 'In whose heart are Thy ways.'

Many no doubt know what stands for these words in the Latin Version of the Psalms; a version used even more largely than ours, and more familiar in its beauty to a vast number of our fellow-Christians—*Ascensiones in corde suo disposuit*: He has set ascents in his heart; or, as we should phrase it, He has set his heart on ascents.

It meant for the Psalmist no steep or dangerous climb. It meant at most a long and tedious journey, the sort of thing that is a venturesome undertaking to a quiet soul who is at far distance from the Temple and the City of God. But it led him upwards, it led him to the place he wished to reach. Whether in memory or in anticipation, the road was dear to him. He had set his heart on it: he loved the upward path. It was fixed in his affection. *Ascensiones in corde suo disposuit*.

Far different from the attraction of that easy pilgrimage is the Challenge of the heights which has drawn into closest fellowship many of those who are here to-day. A great unanimity gives intense significance to your assembling in the House of God. For the lovers of the heights are a brotherhood more intimate, more closely united, more affectionately disposed to one another than almost any other group of men. It is as natural as it is beautiful that before your great meeting this evening you should meet here to remember, as in God's presence, those whose names are written in your Records in letters of gold.

It is not for us timid pedestrians to pretend that we understand your love of the heights. But if even from a distance

and from some miserably lower level we have looked from afar upon the mountains, or known the silence of the snowfields, and the widening vision, and the exhilarating keenness of the air and the perfect azure of the skies (and you are good enough to believe that even the humblest climber may breathe the Spirit of the Mountains), can any one wonder at the fascination those mountains have for the real climber, that you have so set in your hearts the love of the heights? *Ascensiones in corde suo disposuit*. Might it not almost be the motto of the Alpine Club?

It is simply because they both came from our county and diocese of Chester that I am asked to speak to-day. I am bidden, so far as such a thing is possible, to represent the homes from which they come, and those who love them best. They, I am sure, understand and value very highly what you wish to express by your presence. They are grateful to you for it. I got them to tell me something of the boyhood and early years of their glorious sons. In each instance there was the like story of quiet modest strength, of infinite perseverance, of a great and tender love of home, of a transparent purity of heart, of the deep and simple things that make fathers and mothers very thankful and very proud. I wish you could have been with us at Birkenhead, where, nearer home, an assembly not less significant, though it may be less august than this, tried to show love for them and theirs.

And as we read what was so lovingly written, with all the eloquence of its reserve, it was not difficult to see in it the presage of what was to follow at Winchester and Shrewsbury, at Oxford and Cambridge, in the Alps and in Spitsbergen, and at last on Mount Everest. It was the same Leigh-Mallory who veiled the grace and brilliancy of his leadership under the impenetrable cloak of his modesty; who, when something like disaster occurred insisted on claiming responsibility for it, and when an incredible presence of mind on his part saved the lives of others never let us know that it was he; who reminded us that in a matter like this we are all comrades! Yes, and the same Andrew Irvine who, with all his brilliant, his amazing, his premature attainments as a climber, would laugh as he set himself to the humblest task, or use the splendour of his giant strength to bear the burdens of other men.

Ascensiones in corde suo disposuit. Was it only the love of the high mountains that was set in hearts like these? No; but rather that with the love of the mountains was the ascent of spiritual altitudes, splendid peaks of courage and unselfish-

ness and cheerfulness, such as are reached not necessarily by the surefooted and the clear-headed, but always by the compassionate, the brotherly, and the pure in heart.

For indeed the record of Mount Everest may well help men, if not to feel the mystery of the mountain, yet surely to enter more deeply, more reverently, into the spirit of the mountaineer.

Thankful as we are for what the Expedition is able to tell us of the way and the attempts and the great achievement and for its marvellous pictures, it is perhaps as a human record and a human document that it speaks most clearly and speaks to us in St. Paul's to-day. The indomitable cheerfulness, the amazing courage of it, the brotherly kindness and loyalty one to another, the passion for work, the refusal of praise. You have indeed set Ascension in our hearts: you have helped us more than you think to seek those things which are above; Whatsoever things are pure, whatsoever things are lovely and of good report, if there be any manly virtue, if there be any praise, you have helped us to think on these things.

George Mallory, Andrew Irvine, lovely and pleasant in their lives, in death were not divided.

It seems as though when God means us to learn He is wont to clothe that by which He teaches us in some form of simple and solemn brevity, of which it is hard to mistake or resist the appeal. So it is here! The cloud clears away for a moment and you are allowed to see the two men making steadily and strongly for the summit. That is the last you see of them, and the question as to their reaching the summit is still unanswered; it will be solved some day. The merciless mountain gives no reply!

But the last ascent, with the beautiful mystery of its great enigma, stands for more than an heroic effort to climb a mountain, even though it be the highest in the world—*Sic itur ad astra*.

Think of it how you will: as the ascent by which the kingly spirit goes up to the House of the Lord; as the ascent through death to endless life; as the ascent by which the men of clean hands and pure hearts ascend into the hill of the Lord and rise up in His Holy Place; as the way He went who said, 'I go to prepare a place for you, that where I am ye may be also.'

Lofty designs must end in like effects,

Loftily lying leave them; still loftier than the world suspects
Living and dying.

For they go indeed from strength to strength;

They have set their hearts on the heights.

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A Service for Mr. Mallory was held at Magdalene College Chapel, Cambridge. The following address was delivered by Mr. A. C. Benson, Master of Magdalene :

We must not lightly or tamely question the right of men to risk their lives for great or glorious or chivalrous ends. Upon that right and upon those risks some of our highest freedoms and privileges have been founded. Moreover, the impulse to risk life for a cause, whether it be an uncalculating swiftness, or a calm survey and acceptance, is a spectacle that evokes instantaneously the most generous admiration of humanity, and kindles the noble desire of imitation. If we require a sanction, the Gospel, which provides many unexpected blessings, not only pronounces no blessing on the cautious husbanding of life, but regards life thus saved as life most irreparably lost.

To-day we are confronted by the problem in its most poignant and tragic aspect. George Mallory, whom many of us knew, and whom none could know without loving, has lost his life in a great adventure ; twice before he had taken the risk, and two years ago his personal achievement was described by the leader of the Expedition as 'not only the most successful and the most daring feat in high mountaineering yet recorded, but one of the greatest feats of human endurance in any field of activity.' Yet he who earned this supreme commendation was one of the most modest and least self-conscious of men. He spoke willingly of his own experiences, but he never introduced the subject himself, nor showed the smallest desire for recognition. This was, I think, the essence of his wonderful charm, that he was so unconscious of his great personal beauty, his gifts, and his achievements, while his sympathy with those with whom he came in contact, their tastes, their preferences, their opinions, was deep and genuine. He had a great interest in all human questions and causes, in all the beautiful, moving, and civilising elements of life. He shared this freely ; he laboured for peace, and thought it the first of duties to bring home, if he could, to others the visions and ideals which he held so dear. He was a great idealist, and the gentle equanimity with which he dealt with others grew and increased in him year by year ; for in his early days at Cambridge he was often both peremptory and argumentative, while in later days he was remarkable for his serenity and bonhomie, and too much in earnest to risk either provoking or being provoked. Indeed, knowing him intimately as I did for twenty years, and

recognising his stainless purity and simplicity, I say unhesitatingly that he had grown larger-minded, more public-spirited, more unselfish year by year, and, though ever more enthusiastic, he had become at the same time more patient, tolerant, and reasonable.

He had lately taken up a post at Cambridge which would have given full scope for his energies, and afforded him exactly the opportunities he most desired. He had established himself here with great hopefulness and enjoyment, and in the happiest of homes. Our hearts go out in sympathy and sorrow to those nearest and dearest to him, whose loss is better imagined than described.

The cutting short of so brave, high-minded, and energetic a life is a tragic mystery, however much we may seek for consolation. And, indeed, the only victory that the spirit can win in this, as in other grievous catastrophes, is that we should be grateful for a beloved memory and a high example, and acknowledge at every moment a stronger and a higher origin for events than the will which we call our own.

EVEREST: THE LAST CLIMB.

Climbing in air too thin for mortal breath

These men stood poised on the World's parapet:

Watched by the stars, on the last height they met,
Content in Victory, the Kiss of Death.

D. W. F.

THE BATTLE WITH EVEREST.

BY A HIMALAYAN TRAVELLER.

[Reprinted by Permission from the *Morning Post* of June 24, 1924.]

THE attack on Everest has failed again. The first attempt two years ago resulted in the loss of seven Himalayan porters. This year two of the best young English lives have been lost. Is it all worth while? Lives are lost, money is

expended, time, energy, and resource are spent. What object is gained ?

No mountaineer doubts the value. He has willingly run risks himself, and he knows that it is only through running risks that mountains are climbed. But the value of these efforts is not so evident to the general public. Let me explain what it is.

No man will willingly remain for all his days at the foot of a hill without trying to get to the top. Certainly Englishmen, wherever they travel, when they see a hill ache to be at its summit. The way up Mont Blanc has already been shown by a Frenchman over a hundred years ago, but Englishmen soon found their way to the Caucasus and the Andes and climbed their highest peaks. And not only Englishmen, but also the Italian Duke of Abruzzi, started the assault on the Himalayas. It could not be expected that Englishmen would long resist the challenge which Mt. Everest made to them to climb even its own towering height. Hence these efforts which have been made since 1921 with such ample preparation and careful forethought at headquarters, and such determination, courage, and daring by the climbers on the mountain itself.

One quite tangible and evident result has already been obtained. Physiologists and the medical profession now know much that they would not have known, but for this Expedition, concerning the adaptability of the human body to the conditions prevailing at extreme altitudes. Once again it has been shown that, if an organism exerts itself in a given direction, that is brought into being which will enable it to proceed in that direction. The Everest climbers discovered that within certain limits they did gradually get acclimatised to the altitude, and the Himalayan porters were able to carry small loads even to 25,000 ft. Twenty or thirty years ago this last feat would certainly have been ruled out as quite impossible. We do know, therefore, something more of the capacities of the human race, and we do know that those capacities can stretch themselves by exercise.

It is not only physical powers, however, that can extend themselves ; the spirit, also by reaching out, can develop itself. The Everest climbers who returned in 1922, came back much more confident than when they started. At the time they set out they were by no means sanguine that the summit could be reached. When they returned, even though they had failed, they were sure that Everest could be conquered.

This year they went out with that idea sunk deeply into their minds. Owing to the exceptionally severe weather they encountered in the one month during which Everest is open to attack they failed again, but I should be surprised to hear that this year's Expedition will return believing that Everest is invincible.

They will be more acutely aware than before of the risks and dangers which have to be run, but I doubt if they would hold that the summit will never be reached. And when it is eventually reached this will be the gain.

Man will once more have shown his mastery over his physical surroundings. By pitting his endeavour against the material forces of the world he heightens his spirit and sharpens his courage.

The practical value of the endeavour lies also in this fact. For centuries and centuries the Himalayan peoples have lived in the Himalaya looking up at the snowy summits, but never dreaming for a moment of attempting to scale them. The Tibetans are a hardy people, who have lived all their lives at altitudes often of 15,000 and even 16,000 ft. They would naturally be well acclimatised to great heights, but not one of them has ever attempted to ascend any of the really high peaks of the Himalaya. The Nepalese also live within sight of Mt. Everest, and they, too, are a hardy mountain people, yet not even they have essayed to climb either the greatest or any of the lesser peaks. Both the Tibetans and the Nepalese were totally unaware of what they could do until a party of Englishmen came from their island home and showed them that they could even carry loads to 25,000 ft., and that it was reasonably probable that, without loads, they could reach the summit of Everest.

They had not attempted, they had not dared; they did not therefore know of what they were capable.

It is through this knowledge of our capacities—the capacities both of ourselves and of the Himalayan peoples—that we are able to do so much more in the Himalaya. We move troops about with very much greater freedom than we believed possible thirty or forty years ago. And not only troops, but civilians, men and women, move about the Himalaya in a way that only surveyors thought of a generation ago. With this benefit they get that same enjoyment out of life that hundreds of thousands now get who visit the Alps every year. They will see the beauties which the Himalaya alone have to offer. For with the difference in scale goes the difference in

beauty and grandeur. It is not merely that the Himalayan peaks are so much higher than the Alps. When you are deep among them this additional stature gives them a difference in quality. The Himalaya possess a greater sternness and austerity which can only be seen and appreciated by those who live among them.

The advent of the English with their spirit of adventure has awakened the native races to a consciousness of their surroundings. Expeditions to these regions benefit the English themselves, by keeping alive the spirit of ambition and endeavour, apart from the pleasure which they naturally derive from matching their brains and sinews against the forces of Nature, and feasting their eyes on the grandest spectacle that Nature has to offer.

In the days of peace England will always hold some who are not content with humdrum routine and soft living. The spirit which animated the attacks on Everest is the same as that which has prompted arctic and other expeditions, and in earlier times led to the formation of the Empire itself. Who shall say that any of its manifestations are not worth while? Who shall say that its inspiration has not a far-reaching influence on the race? It is certain that it would grow rusty with disuse, and expeditions like the attempt to scale Everest serve to whet the sword of ambition and courage.

Three British lives have already been lost in these attempts on Mt. Everest. In the first expedition a Scotsman, Kellas, who had devoted years of his life to climbing Himalayan peaks, succumbed when within sight of this mountain which it was his highest ambition to ascend. He was worn through with the hardships that he had put himself to endure.

And now Mallory and Irvine are gone. But they have left behind them a tradition of high endeavour—of high endeavour not merely in mountaineering, but in every branch of human activity—which can never be lost. And not only this. If there is one thing more evident than another in the story of Mt. Everest it is the chivalrous spirit that has been shown. All have realised that it is only by pulling together, by working as a whole, that they will ever attain their object. And there are few more chivalrous feats, or more heroic, in the history of mountaineering than the rescue by Norton, Mallory, and Somervell of those four porters, who, through their lack of nerve, had been marooned on the North Col. There had been heavy snowfall, and the conditions were so dangerous that a single slip or the least error of

judgment in selecting a line must have meant instant disaster. But these three took the risk and safely brought the porters down.

So if Everest, as Mallory said prophetically in his last dispatch, 'shows no mercy,' at any rate it draws out chivalry from those who battle with her. And if we sum up all that men and women have felt the whole world over on hearing of the fight with Mt. Everest, he would be foolish indeed who said that those lives have been lost in vain.

TEN WEEKS IN THE SOUTHERN ALPS OF NEW ZEALAND.

By H. E. L. PORTER.

THE best investment I ever made was the purchase of a complete set of the *ALPINE JOURNAL*. I know no more fascinating occupation for the long winter evenings than the study of it from end to end. It was due to such a course of reading, reinforced by excursions into the writings of Harper, Mannering, Ross, and Miss Du Faur, that what had been for years a hazy aspiration to visit the Southern Alps some time was transformed into a definite resolution to do so at the earliest possible moment. Even from photographs one can realise the amazing beauty of the Tasman glacier and its flanking mountains, the giant bulk of Aorangi, the icy chastity of Mt. Tasman, the superb symmetry of Elie de Beaumont and its satellites, and the buttressed strength of Malte Brun. The appetite for novelty is also whetted by the Alice-in-Wonderland fauna and flora—mysterious bird-names such as kiwi, weka and kea, and speculations as to the nature of such plants as the vegetable-sheep and the Spaniard.

Before starting out I had made certain of a companion in Hugh Chambers, an enthusiastic New Zealand member of the Club, who unites an exhaustive knowledge of all that has been achieved there in the past with a keen eye for future possibilities. With him to look after me, all the difficulties that beset a stranger in a strange land vanished: no days were wasted or time lost through ignorance of where to go and what to do; but unluckily the weather seldom relented in the five weeks we were together.

After provisioning ourselves on a lavish scale in Christchurch, we opened our campaign on December 15 up the Rangitata,

one of several big rivers which deploy on to the Canterbury plains through narrow gorges, above which they expand into wide flats, where the old glacial bed, to judge by the contours, is buried under hundreds of feet of shingle. The head of the Rangitata leads over to the Godley glacier, and has hardly been visited since Dennistoun did his exploration there. Our objective was a range some distance below the head, named after its highest and most prominent peak, the Two Thumbs : this double-headed peak looks most attractive from the express as one travels south, and would certainly have been climbed long ago if it had been a little more accessible. Chambers had had an eye on it for some time, and had actually had a shot at it the year before with Clive Barker, a novice ; after much hard work they had been robbed of success, largely by the weather. They were both keen to try again, and as for me, who had never even seen a virgin peak above the snow-line, the prospect made my mouth water.

We left Barker's home at Woodbury in a hired car, which carried us and our stores some forty miles up the valley over a villainous road to Ben Macleod, a station owned by a cousin of Barker's, who fed and housed us, lent us horses and harness and cart, and generally smoothed our way for the task of getting into position to attack the mountain, a task more laborious than the actual ascent. As it was a busy time of year with the sheep musterers, no one was available to look after the horses while we were climbing : we concentrated therefore first on another virgin peak, named Alma, which was easier to get at. The spring-cart was loaded up ; Barker drove, I acted as balancer, and Chambers rode behind. After eight miles we looked in for morning tea at Mesopotamia, the next and last station up the valley, once owned by Samuel Butler : it was the mystery of the unexplored valley and its remote, impassable gorges that inspired the scenery of the opening chapters of 'Erewhon.' After tea and a chat with the manager, we bumped and jolted over shingle and through numerous creeks for another eight miles to a musterers' hut at the foot of Alma Creek. Having corralled the horses and shouldered heavy swags, we ascended the creek without undue difficulty for three hours to the highest patch of ribbonwood, and set up our little green tent. The night was cold, and one blanket apiece served only to emphasise the fact. The next day was windy and bleak, but good enough for the ascent. The climb involved nothing but simple snow and rock, and at 9.15 I stood on my first untrodden summit. Imagine my chagrin when we spotted, neatly piled on the exact

top, the bones of a defunct rabbit ! Anticipated by a rabbit ! —never : it had clearly been carried there by a bird of prey ; anyhow it was soon decently interred beneath a mighty cairn, and happily forgotten. We saw nothing, and the cold speedily drove us down. The chief interest of the day was the discovery of a considerable error in the map : Alma proved to be on the main divide of the Two Thumb range, whereas the map placed it a mile off on a subsidiary spur. We were also intrigued by finding a huge square hole in the bed of the valley below the snow-line ; it was quite fresh, and the earth was splashed several feet away equally all round, so whatever made it must have come from directly above or beneath. We got back to the bivouac in just over eight hours from the start, and went on, after a meal, to the hut, rain setting in for the night shortly after. It cleared by 10 A.M., and we set to work to catch and harness the horses—that is to say, Chambers and I offered advice, while Barker, being young and competent, did the work. Eventually we got the charger into the trap, and the trap-horse under the riding-saddle : the first animal was clearly going to resent the impertinence, but imminent disaster was averted by prompt action. The next day, with the assistance of Barker's cousin, we made an abortive attempt to force horses up Black Birch Creek, which leads out of the main valley in the direction of the Two Thumbs, and were driven back to our base, depressed by our failure and a furious nor'wester.

On December 21 we returned to the charge with different tactics. Our host had a nimble and sure-footed pony, whose life he was willing to risk in such a good cause : our requirements, reduced to the uttermost, were packed into two sacks, and, with the pony carrying them, we set off in the teeth of the fierce gale, against which progress could be made only by leaning at a ridiculous angle, to climb the interminable tussock-clad slopes of Mt. Brabazon (5879 ft.). Luckily, as we mounted, the wind decreased. Near the top we saw some fine specimens of the vegetable-sheep, a cushion plant of the Daisy family which, seen at a distance of some yards and in a dim light, might easily be mistaken for a resting ewe. On the far side we had first to traverse and then to descend a long succession of screees of all consistencies and sizes. Barker was, of course, deputed to lead the pony, and by the combination of his agility and judgment with its sure feet, aided to some extent by Chambers and me, who shouldered the sacks for the last 1000 ft. of straight descent, the whole outfit reached the bed of Black Birch Creek above the impasse and a couple of miles below

the musterers' hut where we were to spend the night. It was not much of a place, but we had brought with us a big tent-fly to cover the roofless portion of our palace, and we had a fine struggle with the playful wind before we got it in position. There was plenty of firewood, but, as so often happens, nothing to cut it with, until the deficiency was made good by our versatile steed. In front of the hut, when we arrived, was a luxuriant growth of long snow-grass: the pony was small but ravenous, and within an hour or two had turned the jungle into a lawn, reposing on the centre of which lay the missing chopper. With the aid of some moth-eaten blankets we had quite a warm sleep that night, somewhat interrupted by our horse, who would sneeze the quarter-hours throughout the night. Off at 5.20 next morning, we ascended a lateral creek for some miles of fair going, and then stumbled over a vast moraine, very reminiscent of the Dauphiné. At the head of this we paused to select our route. We could either ascend easy snow to the col between the two peaks, and attack what were known to be steep and probably difficult rocks up to the Big Thumb, or make nearly certain of the big peak by working away to the left and mounting the S.E. flank of the mountain by snow and rocks on to the main S. arête. The first route, if successful, would give us the Little Thumb as well, for Chambers had been some way up it from the col last year and knew it would go; but as the party was untrained, and its cohesion doubtful, we took the easier alternative. The ascent, without providing any thrills, was interesting all the way: unlike that of Alma, it required some knowledge of snowcraft and route-finding. We arrived on the summit (8338 ft.) hopeful of seeing the giants to the west, but the nor'wester was still discharging its venom on the main divide, robbing us of a unique view. We built a cairn and prospected a bit on the ridge leading to the col, and then returned in our tracks. We got back to the hut about 6 P.M.; to our relief the pony was still visible and still eating, and the fly was still defying the wind. Next day we returned to Ben Macleod, having completed our programme, watching without disgust new snow enveloping the hills we had just left. Out of the eight days we spent in the valley only two were at all fit for climbing; on each occasion we were fortunate enough to be in position to attack on the right day.

Well satisfied with the auspicious opening of our season, we transferred ourselves to the Hermitage, a Chamonix, Zermatt, and Grindelwald all rolled into one house. At the end of the year it is terribly crowded, and my first impressions were not

favourable. But, once the big rush was over, I found it a delightful spot, and enjoyed every minute of my long stay there. Good food, good service, and unlimited hot water never failed; while all concerned in the management took keen interest in climbers and their plans, and paid unwearying attention to their comfort and safety. We escaped after one wet and noisy day to the quiet of the Malte Brun hut. I shall not easily forget my first walk up the Tasman glacier at dawn on a fine still morning: it is all the more wonderful by contrast with the approach from the Hermitage up the Tasman flat and lateral moraine, which takes four hours, and is not very interesting after the first novelty has worn off. The next day Chambers and I ascended Mt. Darwin, a fine peak of 9715 ft. separating the Darwin glacier from the upper reaches of the Tasman, where it makes its great bend to the east. It bears a remarkable resemblance to a recumbent lion. The ridge is gained easily by the glacier slopes on its N. flank, and is followed to the summit. Our day on it was not wholly successful: soon after leaving the hut, Barker sat on his ice-axe, spiked himself and had to retire; Chambers felt thoroughly ill all day, and only persevered for my sake; there was a strong wind and much new snow. We got to the second peak some fifty feet below the highest point and half an hour from it, and then retreated. That was on December 31. The next eighteen days were a complete blank. The first four we spent stormbound in the Malte Brun hut, consoling ourselves with experiments in cookery, provisions being plentiful and various, and the reflection that we were better off there than in a crowded hotel. A few days later we were again detained for three days in the Hooker hut: a pocket edition of *Hamlet* was our only literature, and we amused ourselves by finding topical allusions in it. Some were far-fetched, but one was distinctly happy: 'I am but mad north-north-west,' says Hamlet. 'When the wind is southerly, I know a hawk from a handsaw.' We were also distinctly envious of Mercury 'new-lighted on a heaven-kissing hill.' One wet day in desperation we volunteered to help at road-mending, where the swollen creeks had washed away the track. In idea the day was to be a picnic; in actual fact it was a long and strenuous struggle to get various vehicles ranging from private cars to a 4-ton lorry to their destination—a struggle in which the total available man-power and engine-power were barely sufficient to secure an incomplete victory by midnight.

At last, on January 17, we started once more up the Tasman. On the 18th we found the vicinity of the Malte Brun hut swathed in a blanket of new snow several inches deep. Peaks seemed out of the question for a day or two, and we decided to spend the 19th playing about on the Malte Brun glacier. An early start being pointless for this purpose, we got off at 6.30 with provision for one meal. At 1.15 we were sitting, rather to our own surprise, some ten feet above the top of the mountain, the just visible cairn being buried under that depth of snow. At intervals as we sped up the glacier, crossing a lot of fresh avalanche stuff, we agreed it would be folly to persevere too long; but when we got in full sight of the N.W. ridge, which is the usual line of ascent, and saw that it was miraculously black (or rather red, the rock being a warm red sandstone), no more was said and on we went. The first ascent of this route is vividly narrated in Miss Du Faur's book, and I will only add a few general impressions. Below the ridge there is no real difficulty, provided you know the best line to take. The ridge itself is wholly delightful, being splendidly firm till the final rise; and the famous 70-ft. knife-edge is as sensational a place as I know. It is often taken straddlewise—a method which looks and probably is painful; but it can be crossed swiftly and pleasurably with hands on top and toes skimming from nick to nick three feet below. In technical difficulty, however, it is not in the same class as the acrobatic routes on the Chamonix aiguilles. We would have liked to have made the first guideless traverse of the mountain, but it was late and Chambers had not been on the other route; so, after munching an iron ration of a couple of figs and gingernuts, we returned as we came, getting in with the help of a glorious full moon just as night came on at 8.45.

This expedition gave the *coup de grâce* to one of Chambers's ankles, which he had ricked some days before. While he rested it, Barker and I set out at 4.30 on the 21st to have a look at Mt. Haeckel (9649 ft.). This mountain had been ascended only twice, in 1912 by the late Captain Head with Clarke and Murphy, and in 1914 by Mr. Frind with Conrad Kain. Both these parties had gone, by slightly different routes, to the col between Haeckel and Hamilton, and thence climbed the S.W. ridge to the top: both had commented severely on the extreme rottenness of the rock, and since then the ascent had been left alone. I had looked at it with some interest from the ridge of Darwin, and now had another good view of it, as we walked up the level Darwin glacier, the head



Photo : D. Theomin

SEA OF PEAKS ABOUT 8000 FT. N. OF MT. COOK DISTRICT; ON LEFT MT. HAECKEL,
IN CENTRE MURCHISON GLACIER
Taken from Mt. Hamilton.

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SEA OF PEAKS ABOUT 8000 FT. N. OF MT. COOK DISTRICT; ON LEFT MT. HAECKEL,
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of which it blocks. It seemed to me that a perfectly safe and probably shorter route could be made if one could get on to the Upper Darwin glacier above the ice-fall, which from here looked quite impossible, and after crossing it ascend a large square snowfield, connecting with the N. bank of the glacier; from the top of this we could certainly mount to the ridge at a conspicuous patch of black rocks, well above the steep and serrated part of the ridge with the evil reputation.

The first requisite was a sound route on to the upper glacier above the fall. Between it and the Bonney glacier a steepish 500-ft. snow-couloir runs up into the spurs of Hamilton: there were stones at the bottom of it, but not enough to deter one from using it in the early morning. After I had kicked and cut up it, an easy traverse on scree and snow took us from its head exactly where we wanted to be, and before very long we had reached a long rib of rock, which divides the upper glacier into approximately equal halves. Having breakfasted here from 7.30 to 8, we continued our traverse across the glacier, upwards and to the left, till we reached the schrund which guarded the square snowfield mentioned above. Its one weak point speedily proved fatal to it, but the snow above had its revenge by turning into ice and forcing me to ply the axe for ninety minutes on end. The black patch on the ridge was a dark and rotten shale, whose thin spiky laminae, turned up on edge, cut like a knife, if handled carelessly. This stratum reappears in other parts of the range, and I fancy a geologist who traced its ramifications and measured its angles might get a good insight into the nature of the folding hereabouts. The section of the ridge above the black patch was quite reasonably sound, and caused no anxiety at all. By 10.40 we were on the top. The day was unusually calm, and a superb panorama spread out on every side. Away in the east the Two Thumbs greeted us familiarly; in the middle distance that fine but rather inaccessible peak, d'Archiac, loomed tremendous; while an entrancing sea of unclimbed and almost uncharted peaks chained our eyes to the north. The descent by the same route went without a hitch: we only deviated from it at the breakfast-rocks; while we boiled the billy for tea, I was amazed to see a clear way through the ice-fall on to the level glacier below, one immense crevasse being completely choked by old avalanche snow; this discovery eliminated the long couloir, which might have been unpleasant in the afternoon. We were back at 5.10, so early that Chambers thought we must have been up Hamilton, its popular right-hand neighbour, full directions for which he

had given us, in case we did not like the look of Haeckel on closer acquaintance.

On the way down the glacier next day we were puzzled to account for two well-scored parallel ruts, about eight feet apart, running evenly in the direction of the flow, heedless of crevasses, for quite a long distance, for all the world as if the glacier-god had been driving his dragon-chariot on a tour of inspection of his icy domains.

Barker left me a few days later after a joyous traverse of Mt. Montgomery at the head of the Müller glacier. My next expedition was with the chief guide, Frank Milne, with whom I was to have several delightful and strenuous days later. Our aim was to conquer the virgin Unicorn (8394 ft.) on the Banks Range, which diverges from the main divide at Mt. Beatrice towards the S.W. Unicorn can only be reached from this side over the corpse of the two-headed Dilemma, the first peak of the range, climbed by Kain and Fyfe in 1914. On its W. side Dilemma breaks away in slabs of formidable appearance but unknown difficulty, and these were likely to be the crux of the venture. We left the Hooker hut at 3.20 on the 28th, and struck up almost at once on the rock-rib next to that used in the ascent of the Copland Pass. Where this merged into a steep wall, we sidled along a line of weakness where two strata met, and by a short descent reached ice. On this we traversed the flank of Raureka and in due course found ourselves on the divide within a few minutes of Beatrice. This interesting route, devised for the occasion by Milne, is an ingenious improvement on that previously taken, which follows the stony wilderness of the Hooker moraines for an hour or two before striking up. The two peaks of Dilemma were soon vanquished, though we lost half an hour by trying to turn a big gendarme between the horns, instead of climbing a crack straight up it. At 9.45 we were looking down the 400 ft. of slabs, which were the only remaining obstacle between us and our goal. A discerning eye could see at a glance that their uncompromising appearance was mainly camouflage—anyhow, in the upper 250 ft.; the lower part was steeper and barely visible from the top. A series of little felspar ribbons, projecting an inch or two from the greywacke, gave sufficient foothold, and occasional shallow cracks were helpful; half an hour took us to the col, and twenty minutes later we stood on the untrodden head of the Unicorn. A horn was speedily added to the fabulous monster in the only available spot, a niche a foot or so below the razor-back top. From our eyrie

the slabs of Dilemma looked rather like those rocks in the Odyssey where Scylla dwelt: 'No mortal man may scale the cliff or set foot thereon, not though he had twenty hands and feet. For the rock is smooth and sheer, as it were polished.' Foolishly I had chosen to fill my pockets with delicacies, when we left our sacks at breakfast, to the exclusion of my camera, and so missed an impressive photograph. Returning at leisure, we paused to study the W. face of Mt. Cook, for which purpose Dilemma is an ideal view-point. The whole expedition took 12½ hours, the homeward journey being accelerated by some long glissades.

On February 8, I traversed Mt. Sealy by the E. arête and S.W. face in company with Professor and Mrs. Algie, a pair so delightfully enthusiastic about mountains that you might almost say that their avocation is professing Law at Auckland University and their profession scaling the Southern Alps at the Hermitage. They had very kindly consented to my joining their party on their next attempt on Mt. Cook, and while the latter was discarding some of its superfluous snow, we took the opportunity of a fine day to see how we got on together on a rope on a fairly easy mountain. The expedition was a complete success: the E. arête is a jolly rock-ridge with an awe-inspiring precipice on the S. side, looking down into a branch of the Dobson valley; and the S.W. face provides some practice in step-cutting downhill. On the morrow we three were escorted by Jim Stout to the Ball hut, where he kept us in fits of laughter by his flow of anecdote on episodes in his climbing career: Milne and Williams went right through to stamp out a track up the Linda. The next night we had all forgathered in the Haast hut. We started at 1.20 on the 6th on two ropes, Milne being responsible for the Professor and me, while Williams and Stout came behind with Mrs. Algie. By 4, when the lanterns were put out, we were far up the Linda glacier, and reached the foot of the summit rocks at 6. At 7.15 we paused for a meal on the highest rock, and gazed with some awe at the 800 ft. of ice-cap above us. Up the first 300 ft. of this Milne cut regular soup-plates, and then traversed under the schrund to the Hooker arête, which lies at a gentler angle and saves much labour. From 10.45 to 11.5 we sat in a row on the level edge of the summit, eating the inevitable pineapple and drinking in the view of the world beneath us. The hut was regained at 5 without any incident worth recording, our time of 15 hours 40 minutes being the third fastest on this route.

The Linda route has not the best of reputations, and a short critique of the various alternatives to the highest point might be useful. A clear description of the routes themselves is given by Mr. Newton in 'A.J.' xxix. 12, 13, with magnificent illustrations.

(1) The Linda route. Since its first completion by Messrs. Chambers and Wright with Murphy and Clarke in 1912, sixteen parties have been to the top of the mountain : the Linda route has been used by these ten times on the ascent and no less than fifteen times on the descent.

(2) The N.E. Ridge, Zurbriggen's route, has not been followed to the end since 1906, its extra length and difficulty more than counteracting its advantage in point of safety.

(3) Earle's route by the W. arête from the Hooker side, said to be the easiest and certainly the shortest way to the summit, suffers from several drawbacks. The Hooker glacier is inconceivably broken, and generally impassable by February, the usual month for the ascent : in this case the fall has to be circumvented by the Pudding Rock, which is by no means child's play : carrying 40 to 50 lb. swags up it for a comfortless bivouac on an unsheltered slab, exposed to the first arrows of an advancing nor'wester, is hardly the best preparation for a tussle with a really formidable mountain. Things will be better when Milne gets the promised shelter-bivouac erected, a serious undertaking, but one which with his very willing staff of guides, his own energy, and the encouragement of Mr. Wigley may be put through any time. But apart from that, the steep rocks, by which the ascent is made, though of excellent quality when free from ice, face the full fury of the oceanic storms, and can only be tackled in an exceptional season. This year up to the middle of February they were one mass of repulsive, bulging ice in the higher sections.

(4) Fyfe's couloir to Green's saddle is a very evil place, one of those stone-raked abominations which make a prudent man sweat to look at, even in mid-winter.

(5) The Grand Traverse along all three peaks (in appearance quite like the Meije on a large scale) can in the nature of things be but seldom accomplished. It requires a leader who can cut steps quickly and untiringly, and the absolute certainty of a windless day. It looks worthy of its reputation as one of the greatest ice-climbs of the world.

There are, I believe, still two routes to be achieved, one to the central and the other to the low peak : but neither of these will supply the desideratum, a shorter and safer route to the



Photo : D. Theomin

MAIN DIVIDE FROM MT. HAAST TO MT. HAIDINGER

Below part of Grand Plateau with Glacier. Dome on its right. Hochstetter Icefall below.

highest point. Therefore, as men will aspire to stand on Aorangi, and as the pony-track to the top marked on the tourist-map exists only in the imagination of the maker thereof, the Linda route gives in general the best hope of success. Even this was only feasible on three occasions last season : once in early December, when there was no one to use the opportunity ; again, probably on January 25 (on that night the Algies were in the Haast hut, ready to climb on the morrow, when at 11.30 p.m. a nor'wester arose out of the blue and drove them home dripping and disgusted) ; and thirdly on February 6 and 7. A strong party of guides on a joy-climb were driven back at the end of the month by a gale when above the summit rocks. The strength of the defence may be gauged from some statistics : forty-eight persons have reached the top in the twenty-five ascents made up to date, the first being in 1894 ; of the forty-eight those who succeeded at their first attempt can be counted almost on the fingers of one hand.

As to the route itself, given a windless day after not less than five days of sunshine, freedom from impending séracs above Silberhorn corner, a carefully trodden-out track for the hours of darkness, and a leader who can construct a foolproof staircase on the arête above the summit rocks (all which conditions were fulfilled on February 6), the climb is a wholly enjoyable adventure, especially when one is in that state of exuberant health which I suppose Tyndall means to describe in his portentous remark : ' Every fibre seemed a repository of latent joy, which the slightest stimulus sufficed to bring into conscious action.' I was almost calling it a picnic, but picnic is too light a word : there is an indescribable something about Mt. Cook which encourages happiness, but forbids hilarity and frowns on bravado. It is merely silly to shave on the top of the Napes Needle, but to balance an ice-axe on your nose on Mt. Cook is offensive as well.

If I am asked to compare it with ice-climbs in the Swiss Alps, the nearest parallels I can suggest out of my own experience are the Guggi route up the Jungfrau and the Mont Maudit route up Mont Blanc. In each case the longest part of the day is the glacier work in the opening stages, which must be done by lantern light, and where mistakes in route-finding will probably be fatal to success ; in each there follows a rock-passage of similar length and calibre : and except for the last few feet of the Jungfrau, each finishes with another episode on glacier, which may or may not be snow-covered. It is, of course, difficult to balance the respective merits of climbs in

one country done with crampons and without guides against similar climbs in another country done with guides and without crampons : but my impression, for what it is worth, is that under equal conditions the Guggi route is distinctly the toughest proposition in the first stage and the easiest in the last, and that the ice-cap of Mt. Cook takes more conquering than the Mur de la Côte, apart from the effect that the extra 3500 ft. of the latter above sea-level have on the average lungs. In this connexion I may add that we felt no lack of oxygen on the top, and arrived perfectly fresh at the hut, Mrs. Algie's step in particular being as elastic at the end of the day as at the beginning.

Some days later Milne proposed an attempt on the uncompleted traverse of Mt. Blackburn, familiarly, but rather unkindly, known as Rotten Tommy (7835 ft.), first ascended in 1903, when the party spent ten hours on the ascent and a night out. We were to make the fifth ascent of the usual S.W. arête, and descend by the untouched N. ridge. Leaving the hotel on horseback in doubtful weather amid doleful prophecies, this not being one of Milne's lucky mountains, we forded the Tasman and Murchison, and so reached the tiny musterers' hut at the foot of Gorilla creek. As the evening wore on, we were distressed to see obvious signs of an impending nor'wester, which developed further during the night. As far as anyone can do so, Milne knows his weather ; moreover, he had his defeats to avenge. He thought it good enough for a start, so at 5.40 we set out in a drizzle, and going at a great pace without rope or halt, except for five minutes where we struck the ridge at a col, reached the summit, a climb of more than 5500 ft. in $3\frac{1}{2}$ hours. Up to the ridge the going is on steep grass and scree : the ridge itself, considered by some to be technically harder than the better known N.W. ridge of Malte Brun, has a number of very interesting pitches, sandwiched between slopes of debris. The rain ceased near the top, and during breakfast we decided that the outlook was not too bad for the traverse. Almost at once we were forced off the ridge down to the west by a precipitous drop, and had much difficulty in finding an outlet into the couloir descending from its foot. The solution, when found, was a steep and rotten wall, down which we moved obliquely under an awkward bulge, and which with badly numbed fingers proved decidedly arduous. The ridge was soon regained and followed for a time to another sheer drop. Again we took to the W. face, but this time the exit was simpler, and we were soon careering down the vast screes which are a conspicuous feature in the view of the mountain from the Hermitage. Lower

down, the scree-chute degenerated into a waterfall, and we had to take to the scrub. Before we got back into Gorilla creek, we had been punctured by innumerable Spaniards. This peculiar and fearsome plant, well-named *Aciphylla*, is an Umbellifer with long, sword-like radical leaves, forming a veritable armoury of spikes; its flower-stalks are similarly armed with spinous bracts. Since there are no native grazing animals in the country, these elaborate precautions must be due either to inborn vindictiveness, or designed as a protection against drought. The hut was regained at 1.15. Fathers Murchison and Tasman were in an angrier mood for our return, in token of which I carried two bootfuls of muddy water back to the hotel: at times, as the swollen stream swirled round my horse's flanks I expected a more complete baptism, but my trusty steed declined to be capsized.

On Sunday the 17th, with Milne and Williams, I left the Müller hut at 4.45 to climb Mt. Burns (8984 ft.) in dull, quiet weather with easterly clouds drifting uneasily along the icy sides of Mt. Sefton. Burns is on the divide, immediately north of Fyfe's Pass at the head of the Müller glacier, and was first ascended by Mr. Turner and Peter Graham in 1914. Between Burns and the next peak, Vampire, there is a slight depression in the ridge, called Bernard Pass, once crossed by Captain Head and Mr. Earle. We struck up below this pass on snow-covered glacier, and for some time made fast and easy progress. When the time came to rope up, the omens of bad weather were getting momentarily more difficult to ignore. Sefton and all beyond was already in grey mist, and the surrounding gloom was visibly waxing. I expected and even suggested retreat, but Milne to my secret delight refused to give in yet. We proceeded, and got to within 300 ft. of the ridge before real difficulty confronted us at a big schrund. Bernard Pass was now well to our right and probably accessible by an upward traverse, mostly on sloping ledges. But we decided in preference to make for the ridge more or less straight above us. The schrund was vanquished by a delicate manœuvre, but the ice above was so steep, that to save time and labour we took to the rocks on our left, which looked to us all fairly simple: they proved, however, quite the reverse, providing one of those rare instances where an experienced judgment is hopelessly deceived even at close quarters. The holds were masked with new snow more than appeared from below, and also sloped adversely: luckily there were good belays here and there, which served to guard Milne, as,

insecurely poised, he cleared out holds with lifeless fingers. We were frankly relieved to reach the ridge without a slip, and resolved at once and unanimously that, whatever happened, our way down lay elsewhere. At 10.20 we halted on the top for a snack of food, viewing with displeasure a sort of triple mushroom cloud reposing on Mt. Cook in the few glimpses we had of it when the mists parted. The alternatives now open to us were either to return along the ridge to Bernard Pass, traverse Vampire and try to get down the side-glacier short of Mt. Bannie; or to go down to the west into the Landsborough valley by the untrodden Spence glacier. The first course was rejected, chiefly because it led us right into the thick of the weather: the second was chosen, because it would take us into new country, and give us a new traverse, and also because the west so far was still all clear and we could see from our lofty perch a sure way off into the valley, though a very long one. The extremely unpleasant predicament we could be in, if the clouds prevented us from finding Fyfe's Pass to return by, did present itself to our imaginations, but was not considered a vital objection to the scheme. The upper glacier presented no obstacle and one feature of interest. Clinging to a vertical wall of ice 20 ft. high I saw a Mt. Cook flea, an insect about an inch long with powerful nippers, which lives as a rule among shingle by the side of creeks: what freak of fate had lifted it to this eminence, I cannot imagine. Further down the glacier we tried to abridge our original plan, and contour round into the head of the Landsborough, only to find that we were cut off by impossible drops, where the ice hung over steep rock-cliffs. We tried in various places to find a weak point, but again and again were driven back and had to reascend. It looked as if we would have to go back to our first design, which involved yet more ascent, the traverse of a lot of broken ice, and certain benightment, an event much to be dreaded on the wrong side of the divide. As a last hope we resolved to try to descend a long series of slabs which we could see in profile further down the valley: where they steepened at the bottom, it looked possible to get into a shallow avalanche-chute with a fan of debris at its foot. The prospect of saving a couple of hours at this stage was well worth the very slight risk of something breaking away during the five minutes we would be exposed to it. The slabs, when we reached them, were pretty smooth, but set at an angle where friction was useful in checking too rapid descent. Down we slid an immense distance, it seemed, destroying beyond hope of repair breeches, puttees

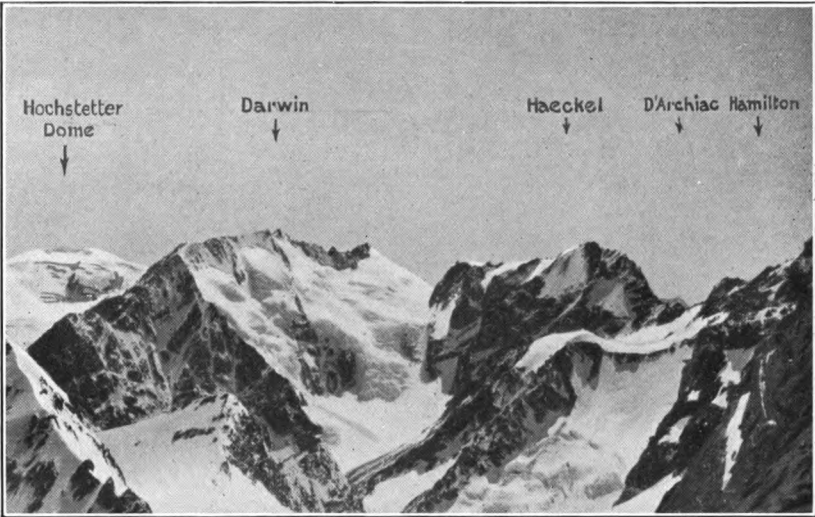


Photo. C. S. Barker.

FROM UPPER TASMAN GLACIER.

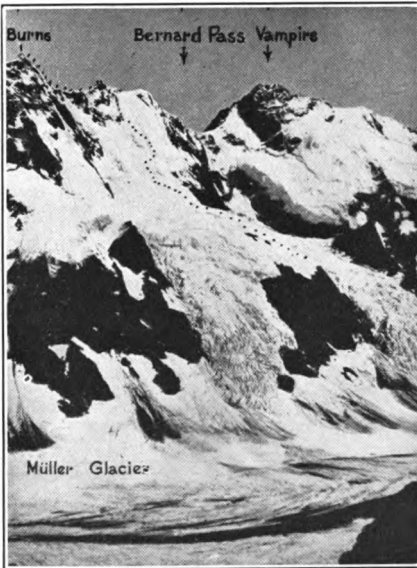


Photo. R. M. Algie.

LINE OF ASCENT.

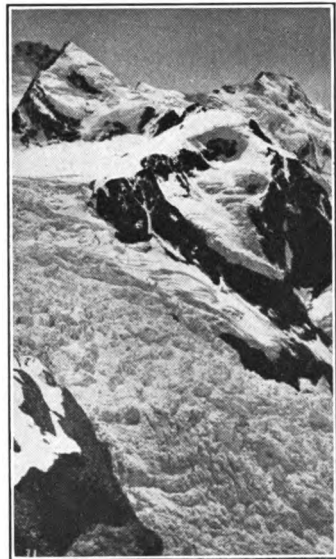


Photo. D. Theomin.

IN FOREGROUND,
HOCHSTETTER ICE-
FALL. Behind, Glacier
Dome and Haast ridge, lead-
ing to Haast, on left. Ridge
from Grey Peak to
Haidinger beyond.

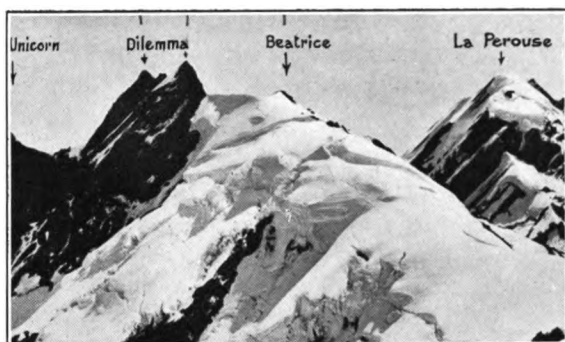


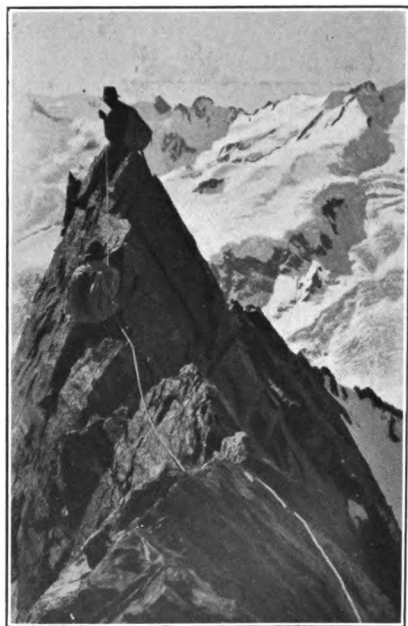
Photo. F. Milne.

TAKEN FROM RAUREKA.



GREY PEAK.

On the left is Mt. Haast, and on the right, below, is the Fox Glacier.



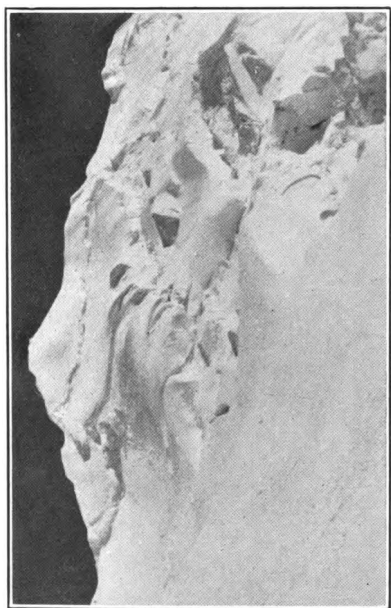
THE KNIFE-EDGE ON N.W. RIDGE OF MALTE BRUN, looking across the Tasman Glacier to the Main Divide.

Photos. H. E. L. Porter.

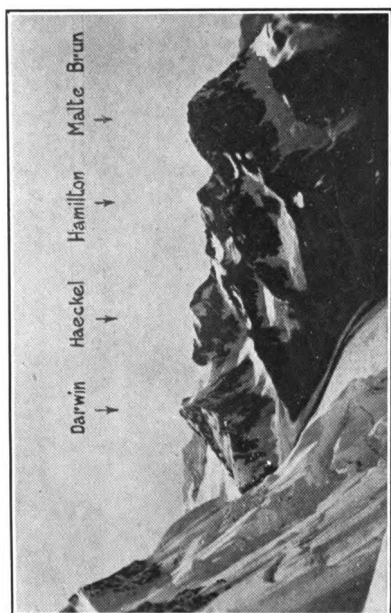
and stockings. Below, where gravity was too strong for friction, some delicate work on small holds had to be accomplished before we could enter the chute. This was rushed with *éclat*, and at 4.15, 5½ hours after leaving the summit, we paused for a short and scanty meal. The whole head of the valley was now obscured in heavy cloud. None of us had been in it before, but luckily I had looked down Fyfe's Pass only three weeks ago from the ridge of Montgomery, and had some idea of the general topography. After an hour's struggle up the glacier, I felt fairly confident where the bottom of the pass must lie, and Milne's excellent bump of locality coincided with my view. The pass is known to be swept by hanging ice, and sure enough at the foot of the narrow trough we had selected, a confusion of dead séracs lay around. Very soon we took to the slabs which bound the couloir on the right, and by which the pass had been descended originally. They were not severely difficult but demanded continual attention, and after so many hours of unremitting exertion seemed interminable. We were unroped : Williams and I kept up what I thought was a very creditable pace under the circumstances, but Milne skipped on ahead prospecting the route at a simply phenomenal speed. A final traverse led us out on to the ridge of Montgomery 150 ft. above the pass at a point I was delighted to recognise. We had taken just over an hour to climb about 1700 ft. of slab. It was now 7.5, and an angry sunset was already dying away in the west. We had still to strike the passage through the much-crevassed upper reaches of the Müller glacier before the light failed completely. With Milne like a bloodhound in the van, this last intricacy was unravelled without a false scent, and soon we were skating down the nearly level ice with no anxiety left, save as to finding the hut in the utter darkness. So long as we were on the ice, the faint glimmer of moonlight filtering through the cloud-bank sufficed to preserve us from serious stumbles ; but groping a way up the unstable moraines, tier above tier, in the direction of the hut was to me a foretaste of purgatory. As a matter of fact the guides went straight to it ; Williams entered it first and held out a beacon light, while the kindly Milne lingered to direct my unspectacled fumbings. Our adventurous day ended at 9.30, ushering in one of those delicious nights when in warmth and comfort one runs over the events of a day full of episode and vicissitude with the trusty friends who shared them. Burns, of course, is not a great mountain ; but in the extent of ground covered, the variety of problems presented

for solution, the thrills of hope and its opposite, and the high speed maintained, it provided one of the very best days I have ever had ; and I believe Milne and Williams think the same.

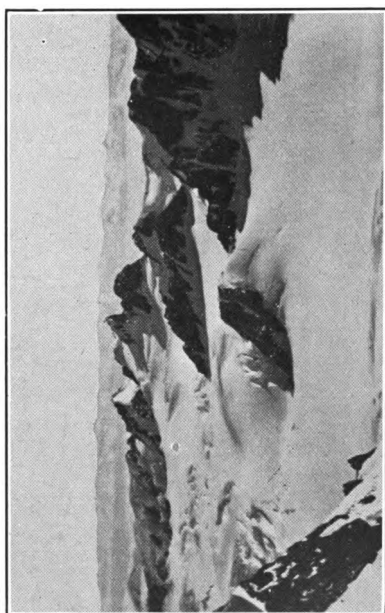
I was due to leave the Hermitage on the 22nd, and could not have desired a better finish to my season. But Fortune smiled again. My symphony actually ended, like an Horatian ode, with a movement which, while perfect in its way, had a more subdued tone than that which preceded it. I had expressed a wish to stand on the main divide somewhere between Mt. Tasman and Graham's Saddle, and Milne filled in the details of this vague scheme by suggesting a visit to Pioneer Pass, which separates the Haast glacier from the Fox ; a continuation along the ridge northwards to Grey Peak (9800 ft.), the highest unclimbed point in New Zealand ; and on to Haidinger, whose southerly peak (10,178 ft.) had not been scaled since Mr. Fitzgerald with Zurbriegen and Clarke first ascended it in 1895. They had started from the Haast bivouac, ascended Glacier Dome, gone round on the Grand Plateau to the Haast ridge, descended on to the névé of the upper Haast glacier below Pioneer Pass, and, contouring under Grey Peak, had reached the ridge north of it and so gained Haidinger. The 19th dawned clear, and that night we witnessed an unforgettable sunset from the Haast hut. Milne aims at giving every member of his staff at least one good climb every season, and we had with us a young porter, Keith Ritchie, who did very creditably on this his first big peak. Starting at 4 A.M. on the 20th, we followed Fitzgerald's route to below the pass. This was protected by a huge schrund of forbidding aspect. Being very keen to make the pass, we went up to look at it, though without much hope. At one point only did there seem the least chance of success : in the inner angle, where the schrund took a sharp bend to the E., the interior being protected from the sun by the gigantic wall at the back, was some hard-frozen debris, which permitted a passage across to a roomy ledge, on which we all assembled. The upper lip was still some fifteen feet above us ; the first few feet sloped up to a niche, in which Milne squatted uncomfortably, while morsel by morsel he hacked out a chimney in the strictly vertical section above. A curious rumbling noise now made itself audible overhead, the cause of which was suspected, but not proved, till Milne at last got his head over the top and nearly had his hat removed by an icy blast. The upper lip of the schrund was the very top of the pass—a phenomenon I have never seen elsewhere. On the far side a gentle snow-slope led down into the heart of the Fox, which lured me almost



MAIN DIVIDE FROM HAAST RIDGE. In foreground névé of upper Haast Glacier. Pioneer Pass on left: Grey Peak in centre (the rocky knob) and Haidinger on extreme right.

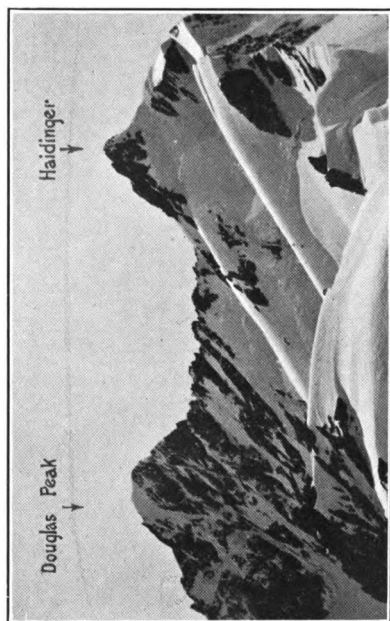


TAKEN FROM PIONEER PASS OR RIDGE ABOVE, LOOKING ACROSS TASMAN GLACIER.



LOOKING N.-W. FROM GREY PEAK ON TO FOX GLACIER.

Nor-wester clouds in distance.



TAKEN FROM RIDGE NEAR GREY PEAK LOOKING N.

Photos. H. E. L. Porter.

irresistibly by its incredible beauty. We hastily donned storm-clothes, and hurried up the ridge to Grey Peak, no great distance away. Its highest point is a 70-ft. obelisk of rock to the west of the ridge, to which it is connected by a little neck; the route up it was steep and rotten, but sheltered from the worst of the gale, which we could now see driving its clouds before it in serried ranks from the W. coast. The time was 9.10. Back on the ridge we circled the horizon with our cameras, and regretfully renounced Haidinger. A most inviting aerial causeway with no visible hindrances led to it, but the least estimate of the time required to reach it and return was six hours, long before which the ridge would be a death-trap. By 1.30, when we got back to the hut, great billows of storm-cloud were boiling over the divide at every gap: our plight would indeed have been perilous had we persevered. We hurried down to the Ball. The rain reached us there about 7, and a perfect deluge set in soon after, which beat a multitudinous tattoo on our tin roof all night. Though not conducive to slumber, this was less irritating than the toboggan races which, on fine nights, take place on the same roof to the accompaniment of peals of parrot-laughter. So ended my season.

I will conclude with some general remarks, subject to revision on better acquaintance with this glorious range.

I was unable to visit Waiho on the W. coast, where Peter Graham has a hotel, from which the marvellous Franz Josef glacier is easily reached. At present not much seems to be attempted from here except the traverse of the Copland Pass and Graham's Saddle, but it will be a fine base for big mountaineering when a permanent bivouac is put up on the Fox glacier. Till then the Hermitage remains the only centre well equipped with facilities. The huts for this district are good, and except at the Christmas season, when they are overrun with tourists, quite adequate to house the number of climbers likely to use them. They are liberally stocked with tinned foods and such stores as rice, oatmeal, cornflour, etc., and provided with most efficient spirit-stoves. I frequently started out in the early hours on porridge and bacon and eggs: in fact, I attribute the first-rate health I enjoyed throughout my stay very largely to the excellence of the commissariat, and only in a minor degree to the recuperation due to the large number of compulsory off-days. The system in vogue is that a fixed daily rate is charged, whether you are in the hotel or the huts, your room being reserved for you in your absence. This system is simply a godsend to the guideless climber, who

need only carry bread and butter with him from the hotel. In former days, I was told, guideless climbing was not only discouraged but made nearly impossible. This is no longer the case; on the contrary, we were given every assistance both by Milne and his staff and by Mr. Long, the manager.

As to the guides, I can fully endorse every word that Mr. Mumm has said in their praise. A charge has been made by a certain writer that New Zealand guides lack enterprise. The reason for this charge is patent to all who know the circumstances, and reflects no discredit on the guides; it is certainly untrue of the present contingent. My account will, I hope, show what manner of man Milne is. As he hates advertisement, I must ask his pardon for repeating Mr. Mumm's words with a corollary: he is a born mountaineer, sure in judgment and swift in execution. He has under him a number of keen men in different stages of development, who are on the road to making a name for themselves in an exacting profession. All they need is more climbers to give them encouragement. I was frequently asked why more members of the Alpine Club did not pay them a visit; they would receive a very warm welcome if they did.

On almost all the peaks over 10,000 ft.—which I believe number eighteen—icecraft is more important than rock-climbing ability: much more so relatively than in the Alps. One has only to look at a photograph of the E. side of the divide to realise this fact. Owing to the big precipitation, there is more snow to be digested and eliminated; hence the glaciers move faster than in the Alps. Faster movement in turn causes vaster fissures and schrunds; hence, as the season advances, some peaks get regularly cut off, either owing to physical impossibilities or to dangers too serious to be ignored. I was surprised to find that crampons are not used in a range where they would be particularly helpful; Geoffrey Young's great work, however, is being diligently studied, and it is to be hoped that his advice on the subject will pave the way to their introduction.

I did not think that the rocks wholly deserved the reputation for rottenness which they possess. For a sedimentary rock the red sandstone of Malte Brun is splendid, while the great slab-faces, which are so prominent on the W. flank of the lesser peaks, are remarkably sound and clean. They run with the dip at an angle of 45 to 55 degrees, and Mr. Mannering has acutely suggested that this is the reason why the W. coast glaciers are so much cleaner than those on the E. Here, as the axis

of the anticline does not coincide with the divide, the dip is against the slope : the rocks are far more liable to disintegration, and the glaciers carry a huge load of debris. Ridges running more or less north and south seem to be the worst offenders, e.g. the notorious ridge of Mt. Sefton.

Finally, there is an enormous field for new work. Though all the giants have fallen, many of them have only been conquered by one route, and there are still fine alternatives to be elaborated, on perfectly sound lines. In other districts men prepared to endure hardship and discomfort for a sure recompense of imperishable memories will find occupation for a lifetime.

THE MOUNTAINS OF THE WHIRLPOOL.*

By J. MONROE THORINGTON, M.D.

'The first travellers called them the Glittering Mountains, on account of the infinite number of immense rock crystals which, they say, cover their surfaces, and which, when they are not covered with snow, or in bare places, reflect to an immense distance the rays of the sun. The name Rocky Mountains was given them, probably by later travellers, in consequence of the enormous isolated rocks which they offer here and there to view. In fact Millet's rock, and M^cGillivray's above all, appear to me wonders of nature.'

GABRIEL FRANCHÈRE.

I. *Athabaska Pass and the Voyageurs.*

THE region surrounding the Athabaska Pass has acquired considerable historic interest because of its importance as a trans-Canadian route in the days of the fur trade.¹ For

* The present paper contains a short history of the Athabaska Pass—its early travellers, the mountains adjacent thereto, the mountaineering, and the writer's expedition of 1924.

Cf. Sketch map, p. 94.

Explanatory notes in quoted documents are in square brackets [].

¹ For the relative importance of the Athabaska Pass route compared with other trans-continental routes, consult chapter on 'Routes to British Columbia,' in R. C. Mayne's *Four Years in British Columbia and Vancouver Island* (John Murray. London, 1862), chap. xiii. p. 353.

this reason, perhaps more than any other, descriptions of it are found in the journals of the early voyageurs.

Athabaska Pass, the gateway between the basins of the Athabaska and Columbia Rivers, was crossed by white men in 1811, when the party of David Thompson, of the North-West Company, used it as a route to the Pacific slope, after hostile Piegan Indians had forbidden them the use of Howse Pass.² The route had been found by white men before Thompson; at least Alexander Henry³ speaks of it as 'a route by which a party of Nepisangués [Nipissings] and freemen passed a few years ago.' It is at least certain that the pass and the Canoe River region had been visited earlier by both Iroquois and Nipissing Indians.

Thompson's Narrative.—Crossing westward in January 1811, Thompson writes: ⁴ '... the view now before us was a steep ascent of snow, in all appearances to the height of land between the Atlantic and Pacific Oceans, it was to me a most exhilarating sight, but to my uneducated men a dreadful sight, they had no scientific object in view, their feelings were of the place they were; ... when night came, we had only wood to make a bottom and on this to lay wherewith to make a small fire, which soon burnt out, and in this exposed situation we passed the rest of a long night without fire, and part of my men had strong feelings of personal insecurity, on our right about one-third of a mile from us lay an enormous glacier, the eastern face of which, quite steep, about two thousand feet in height, was of a clean fine green color, which I much admired, but whatever the appearance, my opinion was, that the whole was not solid ice, but formed on rocks from rills of water frozen in their course; westward of this steep face, we could see the glacier with its patches of snow in a gentle slope for about two miles. ... My men were not at their ease, yet when night came they admired the brilliancy of the stars, and as one of them said, he thought he could almost touch them with his hand; as usual, when the fire was made I set off to examine the country before

² *Description of and Guide to Jasper Park* (edited by E. Deville, Department of the Interior. Ottawa, 1917), p. 16.

³ 'New Light on the Early History of the Greater North-West,' *Henry-Thompson Journals, 1789-1814*, Elliott Coues (F. P. Harper. New York, 1897), vol. i. p. 253; vol. ii. p. 652.

⁴ *Thompson's Narrative of his Explorations in Western America, 1784-1812* (The Champlain Society. Toronto, 1916), p. 445 *et seq.*

us, and found we had now to descend the west side of the Mountains : I returned and found part of my men with a Pole of twenty feet in length boring the Snow to find the bottom ; I told them while we had good Snow Shoes it was no matter whether the Snow was ten or one hundred feet deep. On looking into the hole they had bored, I was surprised to see the color of the sides of a beautiful blue ; the surface was of a very light color, but as it descended the color became more deep, and at the lowest point was of a blue, almost black. The altitude of this place above the level of the Ocean, by the point of boiling water is computed to be eleven thousand feet (Sir George Simpson).⁵ Many reflections came to my mind : a new world was in a manner before me, and my object was to be at the Pacific Ocean before the month of August, how were we to find the Provisions, and how many Men would remain with me, for they were dispirited, amidst various thoughts I fell asleep on my bed of snow.'

Franchère's Narrative.—Gabriel Franchère was a French-Canadian who had enlisted as a clerk in the Pacific Fur Company, had rounded the Horn in the *Tonquin*, and largely assisted in the establishment of Astor's post at the mouth of the Columbia. In his journal ⁶ he has recounted the arrival

⁵ While it has been supposed that Thompson later obtained certain of his figures for altitude from Sir George Simpson, there was another gentleman named Simpson who may have been equally responsible for the erroneous figures. At least, Thomas Drummond, Assistant Naturalist to the Second Franklin Expedition, who spent the winter 1825-6 near Jasper House, makes the following statement in his journal : ' The kindness of Lieut. Simpson, R.N., who was at this time surveying the country, gave me the opportunity of ascertaining the latitude of the commencement and termination of the Rocky Mountains Portage. . . . The height of one of the mountains, taken from the commencement of the Portage, Lieut. Simpson reckons at 5900 feet above its apparent base, and he thinks that the altitude of the Rocky Mountains may be stated at about 16,000 feet above the sea.' (See Hooker's *Botanical Miscellany*, vol. i. p. 190.) In none of the literature consulted is there the slightest evidence that David Thompson and Sir George Simpson ever met. David Douglas, however, became acquainted with Sir George Simpson, at Norway House, in 1827.

⁶ *Voyage à la côte du Nord-Ouest de l'Amérique Septentrionale* (Montreal, 1820. English translation and edition by J. V. Huntington, *Narrative of a Voyage to the North-West Coast of America*, Gabriel Franchère. Redfield. New York, 1854), pp. 120 and 288.

of Thompson's canoes : ' . . . a well-dressed man, who appeared to be the commander, was the first to leap ashore, and addressing us without ceremony, said that his name was David Thompson, and that he was one of the partners of the North-West Company. . . . Mr. Thompson kept a regular journal, and travelled, I thought, more like a geographer than a fur-trader. He was provided with a sextant, chronometer and barometer. . . . ' William Henry followed Thompson across the pass later in 1811, bringing supplies. In 1812 Thompson himself returned eastward.

At the onset of the war of 1812, with the selling out of the Astoria post to the British, a number of men, unwilling to continue in service, travelled eastward at various times, crossing the mountains by Athabaska Pass.

In May 1814 Franchère travelled eastward with a brigade of seventy-six men, exclusive of their families. Of the crossing of the pass he writes : ' . . . we pursued our journey and entered into the valleys between the mountains, where there lay not less than four or five feet of snow. We were obliged to ford the river ten or a dozen times in the course of the day, sometimes with the water up to our necks. . . . We were obliged to stop every moment to take breath, so stiff was the ascent. Happily it had frozen hard the night before, and the crust of the snow was sufficient to bear us. After two or three hours of incredible exertions and fatigues, we arrived at the *plateau* or summit, and followed the foot-prints of those who had preceded us. This mountain is placed between two others a great deal more elevated, compared with which it is but a hill, and of which, indeed, it is only, as it were, the valley. . . . At last we arrived at a good hard bottom, and a clear space, which our guide said was a little lake frozen over, and here we stopped for the night. This lake, or rather these lakes (for there are two), are situated in the midst of the valley or *cup* of the mountains. On either side are immense glaciers, or ice-bound rocks, on which the rays of the setting sun reflected the most beautiful prismatic colors. One of these peaks was like a fortress of rock ; it rose perpendicularly some fifteen or eighteen hundred feet above the level of the lakes, and had the summit covered with ice. Mr. J. Henry, who first discovered the pass, gave this extraordinary rock the name of M'Gillivray's Rock, in honor of one of the partners of the N.W. Company. The lakes themselves are not much over three or four hundred yards in circuit, and not over two hundred yards apart. Canoe river, which, as we have already seen, flows to the west, and falls

into the Columbia, takes its rise in one of them ; while the other gives birth to one of the branches of the *Athabasca*, which runs first eastward, then northward, and which, after its junction with the *Unjighah*, north of the Lake of the Mountains, takes the name of *Slave* river, as far as the lake of that name, and afterward that of *M'Kenzie* river, until it empties into, or is lost in, the Frozen ocean.'

Narrative of Ross Cox.—Returning eastward, in May 1817, with a large party under his charge, Cox,⁷ who reached Astoria as clerk on Astor's second ship, the *Beaver*, has left the following description of the pass : ' At one P.M. we arrived at two small lakes, between which we encamped. They are only a few hundred feet each in circumference, and the distance between them does not exceed twenty-five or thirty feet. They lie on the most level part of the height of land, and are situated between an immense cut of the Rocky Mountains. From them two rivers take their rise, which pursue different courses, and fall into separate oceans. . . . The country around our encampment presented the wildest and most terrific appearance of desolation that can be well imagined. The sun shining on a range of stupendous glaciers, threw a chilling brightness over the chaotic mass of rocks, ice, and snow, by which we were surrounded. Close to our encampment one gigantic mountain of conical form towered majestically into the clouds far above the others (this is called M'Gillivray's Rock, in honour of the late Mr. William M'Gillivray, a principal director of the Company), while at intervals the interest of the scene was heightened by the rumblings of the descending *avalanche* ; which, after being detached from its bed of centuries, increased its bulk in its headlong career downwards, until it burst with a frightful crash, more resembling the explosion of a magazine than the dispersion of a mass of snow.

' One of our roughspun unsophisticated Canadians, after gazing upwards for some time in silent wonder, exclaimed with much vehemence, " I'll take my oath, my dear friends, that God Almighty never made such a place ! " '

Narrative of Alexander Ross.—In 1825, four years after the merging of the North-West and Hudson's Bay Companies,

⁷ *Adventures on the Columbia River*, Ross Cox (J. & J. Harper. New York, 1832), p. 246.

Alexander Ross,⁸ with the young Governor, George Simpson, crossed the pass, eastward bound. Ross gives us an entertaining picture of the scene: 'Turning around to the east [from Boat Encampment], the view is abruptly checked by the mountains, not in continuous ranges, but heights rising above one another, almost everywhere shrouded in a dark haze, which renders a passage over them extremely doubtful. Yet through the apparently inaccessible barrier the traveller has to make his way. . . . The Governor himself, generally at the head, made the first plunge into the river, and was not the last to get out. His smile encouraged others, and his example checked murmuring. . . . But although we were now on the top of the Grande Côte, or Bell Hill, let not the reader imagine we had reached the highest part of the Rocky Mountains; for we saw heights towering above heights, until their distant summits were lost in the clouds. . . . On the summit of the Grande Côte we found the snow eight feet deep, and there we encamped for the night. . . . Leaving now the Grande Côte we advanced on the morning crust at a quick pace, through a broad level valley, thickly wooded with dwarf pines, for about six miles in an easterly direction, when we reached what is called the great height of land. At this place is a small circular basin of water, twenty yards in diameter, dignified with the name of a lake, out of which flow two small creeks. The one on the west side discharges itself into Portage River; that on the east joins the Athabasca River at a place called the Hole. This elevated pond is further dignified with the name of the "Committee Punch Bowl," in honour of which his Excellency treated us to a bottle of wine, as we had neither time nor convenience to make a bowl of punch, although a glass of it would have been very acceptable. It is a tribute always paid to this place when a nabob of the fur trade passes by.'

Journal of Drummond.—In October 1826 Thomas Drummond, Assistant Naturalist to the Second Franklin Expedition, who had spent the year in the vicinity of Jasper House, made a journey across Athabaska Pass to Boat Encampment and returned. He records⁹ that 'at about 15 or 20 miles

⁸ *Fur Hunters of the Far West*, Alexander Ross (2 vols. London: Smith, Elder & Co., 1855), vol. ii. p. 189.

⁹ 'Sketch of a Journey to the Rocky Mountains and to the Columbia River in North America,' Thomas Drummond, Assistant Naturalist to the Second Land Arctic Exploring Expedition, under the command of Captain Sir John Franklin, R.N.—in Hooker's *Botanical Miscellany*, vol. i. pp. 178–219.



ALEXANDER ROSS.



SIR GEORGE SIMPSON.

above the commencement of the Portage, we left the main branch of the Red Deer River, and followed a lesser stream that here joins it, winding along its banks, and not infrequently scrambling in the bed of it, until we reached a small lake, and the Height of Land. The lake is not more than 200 yards in length, and is called the *Committee's Punch Bowl*. Out of its other extremity flows one of the tributary streams of the Columbia. On reaching the middle, I took a hearty draught, pleasing myself with the thought that some of the water I had tasted might have flowed either into the Frozen or Pacific Oceans.' He adds, almost in afterthought, 'The first glacier I saw was about twenty miles before reaching the lake; but I visited a very large one at ten miles nearer the lake.'

Edward Ermatinger's York Factory Express Journal.—Ermatinger was the son of Lawrence Edward Ermatinger, Assistant Commissary-General, and was born on the island of Elba, off the west coast of Italy, in February 1797. Somewhat of a genius, he attained fluency in the Latin, French, and Italian languages, and became a proficient musician, playing the flute and the violin—talents which were not unuseful in the later times of lonely winters in the trading posts. Being taken to Canada, he served in the employ of the Hudson's Bay Company from 1818 until 1828, eventually settling in St. Thomas, Ontario, where he became merchant, banker, and postmaster.

In his journal, Ermatinger¹⁰ has recorded three crossings of Athabaska Pass: businesslike accounts with but little description of natural surroundings. On the first of these recorded crossings the botanist David Douglas—of whom more will be said—accompanied him.

[1827. East-bound.] "March — Tuesday, 20th. — Fair weather. The Express boat leaves Vancouver [Fort Vancouver, seven miles north of the present city of Portland, Oregon] at $\frac{1}{4}$ before 6 o'clock P.M. A second boat accompanies us as far as the Chûtes to assist in carrying over them, and to strengthen the party. Passengers Messrs. McLoughlin, McLeod, Douglas, Pambrun, Annace, and E. Ermatinger.

'Saturday, 28th [April].— . . . Two of our Iroquois who would not have carried snow shoes from the Boat Encampment, had I not insisted upon their having them, now found them very useful and were glad to put them on. A wolverine hovers about our camp. Mr. Douglas wounds him, but he escapes.

¹⁰ 'York Factory Express Journal,' Edward Ermatinger. Reprinted in *Transactions of the Royal Society of Canada*, section ii., 1912, p. 67.

'Monday, 30th.— . . . arrive at the foot of the Grand Côte at 8 o'clock. Ascend it for 2 miles and encamp at 11 A.M. Experienced some difficulty in finding the proper track.

'Tuesday, 1st.—Fine weather. Start at $\frac{1}{2}$ past 4 A.M. Snow not less than between 4 and 5 feet deep. Continue to ascend the Grand Côte by very short stages for about 2 miles till we meet the Rocky Hills on the right at 8 A.M., when we incline to the left a little and having journeyed I should say between 3 and 4 miles encamp nearly a mile on this side of the height of land at noon. We experienced again much difficulty in finding and keeping our road. In fact we could not ascend 50 yards before the people were wandering in every direction in search of the track. What few marks have been made to point out the way I conceive are concealed by the depth of snow. Kill a partridge.

'Wednesday, 2nd.—Fine weather. Resume our journey at 8 A.M. in order to avail ourselves of the crust on the snow. Course north-east. Travel at a good pace for about 17 miles and stop at 11 A.M. to breakfast and give the people a rest during the heat of the day.

[1827. West-bound.] 'October 7th. — Fine weather. Started at 8 A.M. and encamped near the height of land, having passed thro' some very bad swamps and mires during the day. View of the mountains very grand.

'October 8th.— . . . the road was never better, we had not the least snow on the way. Apisasis killed a young grizzly bear at the height of land, and one of the men killed a marten on the Big Hill.

[1828. East-bound.] 'Friday, 2nd May.— . . . to the foot of the Grand Côte where we encamp at 2 P.M. We met with a few patches of snow to-day, but we have not yet had occasion to put on snow shoes.

'Saturday, 3rd.—Fine weather. Start at $\frac{1}{2}$ past 4 A.M. Found little snow till we get half-way up the Hill. We are then obliged to put on snow shoes—take breakfast at the top of the Hill between 9 and 10—resume at noon and proceed to within 4 miles of the Height of Land and encamp at $\frac{1}{2}$ past 3 P.M.

'Sunday, 4th.—Rained and snowed during the whole of last night—day fine but cold. Start at half-past 4 A.M. Pass the height of land at 6. Proceed on deep snow near to Campement de fusil—take breakfast. Afterwards snow diminishes fast.'

A journey across Athabaska Pass was, in those days, a serious undertaking: fur traders could not be expected to keep



DAVID DOUGLASS.

extensive journals, still less to waste much time in admiration of scenic beauty. But what a pity Ermatinger could not have told us a little about David Douglas and his scramblings at the pass summit !

Douglas' Journal.—In the spring of 1827, with Ermatinger's York Factory brigade, Douglas came eastward across the pass. The young Scots botanist writes : ¹¹ ' Through 300 yards of gradually rising open low pine wood we passed, and about the same distance of open ground took us to the basin of this mighty river, a small circular lake 20 yards in diameter, in the centre of the valley, with a small outlet at the west end—namely the Columbia; and a small outlet at the east end—namely one of the branches of the Athabasca which must be considered one of the tributaries of the McKenzie River. This is not the only fact of two opposite streams flowing from the same lake.

' This, "the Committee Punchbowl," is considered the half-way house. We were glad the more laborious and arduous part of the journey was done. The little stream Athabasca, over which we conveniently stepped, soon assumed a considerable size. . . . '

Douglas, in his long journal written at the time, and in a shorter journal done at a later time, describes his ascent of a peak close to Athabaska Pass, and the naming of Mts. Brown and Hooker. The over-estimated altitudes, together with the opinions of contemporaneous writers regarding the elevation of the region, will be considered in a further section of this article.

Narrative of De Smet.—In April 1846 the Jesuit Father, Pierre Jean De Smet,¹² *en route* to Oregon Missions, crossed the pass westward : ' . . . Not far from our place of encampment, we found a new object of surprise and admiration. An immense mountain of pure ice, 1500 feet high, enclosed between two enormous rocks. So great is the transparency of this beautiful ice, that we can easily distinguish objects in it to the depth of more than six feet. One would say, by its appearance, that in some sudden and extraordinary swell of the river,

¹¹ *Douglas' Journal*, 1823–1827. (Royal Horticultural Society. London, 1914), p. 72.

¹² *Oregon Missions and Travel over the Rocky Mountains*, in 1845–46, Father P. J. De Smet (Edward Dunigan. New York, 1847), p. 201.

immense icebergs had been forced between these rocks, and had there piled themselves on one another, so as to form this magnificent glacier. What gives some color of probability to this conjecture is, that on the other side of the glacier, there is a large lake of considerable elevation.¹³ From the base of this gigantic iceberg, the river Trou takes its rise. . . . We fell in with the gentlemen of the Hudson Bay Company. . . . The leaders of the company were my old friends, Mr. Ermatinger, of the Honorable Hudson Bay Company, and two distinguished officers of the English army, Captains Ward and Vavasour, whom I had the honor of entertaining last year at the Great Kalispel lake.'

Warre's Narrative.—In 1845, when there was a possibility of trouble between England and the United States regarding the Oregon boundary, Captain Henry J. Warre,¹⁴ and Lieutenant M. Vavasour, R.E., were sent on a secret mission to seek out routes for troops through the Rocky Mountains. Returning, they left Fort Vancouver on March 26, 1846, travelling *via* Fort Colville to Boat Encampment at the Columbia Loop.

Captain Warre's account of the crossing of Athabaska Pass is brief; but he seems to have been none the less impressed, for he says: 'We had for many days been surrounded by magnificent mountains, and had passed through such a beautiful country, that the effect of this grand and solitary scene (*vide* sketch of the Rocky Mountains, No. 20) was partially destroyed by the sublimity of that which had preceded it. The mountains are about 10,000 feet in height, unequalled in any part of Switzerland for the ruggedness of their peaks and beauty of form, capped and dazzling in their white mantle of snow. . . . On the fourth day we ascended the "Grande Côte" to the height of land on which are situated two small lakes, from whence flow two rivers, the waters of which fall into different oceans—the Columbia into the Pacific, and the Athabasca into the Frozen Ocean. . . . We had, however, scarcely walked 10 miles, when the joyful sound of human voices assured us of more immediate relief, and we soon

¹³ It is quite probable that the Indians of that day knew of Fortress Lake and had visited it.

¹⁴ *Sketches in North America and the Oregon Territory*, Henry James Warre (Dickenson & Co. London, 1849), p. 4. The plates in this very rare book are of unusual interest,

encountered a party of men who had been sent to meet us with provisions, accompanied by Le Père de Smit, a jesuit



Henry L. Warre Del.]

THE ROCKY MOUNTAINS FROM THE COLUMBIA RIVER, LOOKING N.W.
Reduced from an illustration in *Sketches in North America*, by H. J. Warre, London, 1849.

priest from Belgium, and chief of the Roman Catholic missionaries in the Columbia district, who was on his return to that part of Oregon.'

Kane's Narrative.—Following De Smet came the wandering artist, Paul Kane. In November 1846 he wrote ¹⁵ as follows : To-day we attained what is called the Height of Land. There is a small lake at this eminence called the Committee's Punch-bowl ; this forms the headwaters of the branch of the Columbia River on the west side of the mountains and of the Athabasca on the east side. It is about three-quarters of a mile in circumference, and is remarkable as giving rise to two such mighty rivers ; the waters of one emptying into the Pacific Ocean, and the other into the Arctic Sea. We encamped on its margin, with difficulty protecting ourselves from the intense cold. . . . The lake being frozen over to some depth, we walked across it, and shortly after commenced the descent of the Grand Côte, having been seven days continually ascending.'

A year later, in November 1847, he writes of his return journey : ' We started one hour before daybreak to ascend the stupendous Grand Côte, and soon found the snow becoming deeper at every step. One of our horses fell down a declivity of twenty-five to thirty feet with a heavy load on his back, and, strange to say, neither deranged his load nor hurt himself. We soon had him on the track again as well as ever, except that he certainly looked a little *bothered*. The snow now reached up to the horses' sides as we toiled along, and reached the summit just as the sun sank below the horizon ; but we could not stop here, as there was no food for the horses. We were therefore obliged to push on past the Committee's Punch Bowl, a lake I have before described.

' It was intensely cold, as might be supposed, in this elevated region. Although the sun shone during the day with intense brilliancy, my long beard became a solid mass of ice.'

Palliser Expedition : Dr. Hector's Narrative.—In February 1859 Dr. Hector,¹⁶ exploring for the Palliser Expedition, had in mind a crossing of Athabaska Pass, but abandoned the idea : ' Tekarra's foot is so much inflamed with his hunting exertions that he will not be able to guide us up the valley to the Committee's Punch Bowl, so I changed my plan and followed up

¹⁵ *Wanderings of an Artist among the Indians of North America*, Paul Kane (Longmans, Brown, Green, Longmans & Roberts. London, 1859), pp. 160 and 340.

¹⁶ *The Journals, Detailed Reports, and Observations relative to the Exploration by Captain Palliser* (Eyre & Spottiswoode. London, 1863), p. 128.

the main stream of the Athabasca instead. At noon we reached the mouth of Whirlpool River, which is the stream that descends from the Committee's Punch Bowl, and I found the latitude $52^{\circ} 46' 54''$. Leaving the rest to follow up the Athabasca, I ascended a mountain opposite to the valley of Whirlpool River, and had a fine view up it towards the boat encampment. Having been directed by Tekarra, I easily recognised Mount Brown and Mount Hooker, which are much like the mountains toward the source of the North Saskatchewan. They seemed distant 30 miles to the S. by W.'

Narrative of Moberly.—During the summer of 1872 Walter Moberly, having been ordered to discontinue his survey for the Canadian Pacific Railroad through Howse Pass, came northward across Athabaska Pass. On the Columbia River, he says,¹⁷ 'we ran many rapids and portaged others, then came to a Lake which I named "Kinbasket," much to the old chief's delight.' Moberly did not go all the way to Boat Encampment, but informs us that, on August 27, 'we resumed our journey and crossed a high ridge, from which the view was magnificent, part of the Selkirk Mountains, where we could see hundreds of snow-capped peaks. . . . We waded the [Wood] river many times, and camped at the foot of Mount Brown, opposite the old camping ground of the H. B. Company. . . . We now began the steep ascent by the old H. B. Company's trail to reach the depression between Mounts Brown and Hooker—the "Athabasca Pass"—gaining an elevated valley, with grassy glades and groves of firs. Where the walking was fair we made good headway, and camped a short distance north of the celebrated "Committee's Punch Bowl." Following along, and gradually ascending Mount Brown, we saw a grizzly bear above us, and shot a ptarmigan, and then coming on a well-beaten cariboo trail, reached the top of a ridge, with a high conical peak immediately on our right, and a mass of hard perpetual snow on the north side of the ridge, down which we went with difficulty, seeing the fresh tracks of four cariboo. There was a fine view from the top of this ridge, the mountains in the north forming

¹⁷ *The Rocks and Rivers of British Columbia*, Walter Moberly (H. Blacklock & Co. London, 1885), pp. 52, 81. For a condensed, parallel account, see *Blazing the Trail through the Rockies: The story of Walter Moberly and his share in the making of Vancouver*, Noel Robinson (Vancouver News Advertiser. Reprint, 1914), p. 79.

a magnificent amphitheatre, some five miles in width, and the innumerable torrents, dashing down the rocks, with white foam like silver spray, the thick groves of dark fir, the grassy flats and many small lakes, or ponds, rendering it enchanting.

‘From what I saw of it, my impression is that there is a pass through from the Canoe to the Whirlpool River, which at some future day may be utilised, but I cannot be quite certain of the pass, as my examination was very limited, and, therefore, imperfect. . . . The stream I followed is the true source of the Fraser River, and I had thus been within a comparatively short time at the sources of the two large rivers of the Pacific Coast, the Columbia and the Fraser.’

Moberly later returned to Kinbasket Lake and assisted in getting the remainder of his outfit to the site of Henry House, where they wintered. His description¹⁸ indicates the difficulties under which the early survey parties laboured. ‘On the evening of the 1st October the trail was passable, though not finished, as a great deal of corduroying was needed to the foot of Mount Hooker, a distance of about twenty miles from the Columbia, and nearly all the pack animals on the way between the Boat Encampment and the above point. On the 2nd I started back for Party T, from the foot of the mountain, taking Messrs. Green and Hall a part of the way up Mount Hooker to show them where to open the trail and get the supplies to. My endeavor now was to get the supplies all to the height of land, the ascent to which in one place is at an angle of about seventy-five degrees, so that should I not be able to pack them all the way to the Athabasca depot, before being stopped by the snow, they would be over the height of land, and there would be a descending grade along the Whirlpool and Athabasca rivers over which to convey them on dog sleds.’

Thus we have followed the stories of the voyageurs over a period of sixty years—forming an historic tradition excelled by no other area of the Canadian Alps. The narratives are many, scarcely two in exact agreement as to detail, exaggerated as were the tales of the early continental alpine wanderers, and all possessing a certain charm in their naïve description and in the evident appeal of natural phenomena to men

¹⁸ *Canadian Pacific Railroad. Report of Progress on the Exploration and Surveys, up to January 1874*, Walter Moberly. Appendix G, pp. 162-73.

unaccustomed in mountain travel. Athabaska Pass was one of the first trans-continental gateways ; through it passed pioneers to whom, in a measure, we owe the foundation of civilisation in North America. Fortunate are we that something of their story has been preserved. How strange that their difficult ' height of land ' should become an alpine playground !

II. *Nineteenth-Century Speculation in regard to Altitude at Athabaska Pass.*

Dr. Hector, of the Palliser Expedition, has summed up the traffic across the Athabaska Pass, writing : ' As late as 1853 there was a communication at two seasons by this post [Jasper House] with the Columbia district. In March, when the snow had acquired a crust, the express, with letters and accounts, started from Edmonton by the route I had just followed, and continued on to the boat encampment, to which place, by the time they arrived, owing to the earlier spring on the west side of the mountain, the brigade of boats had ascended from Vancouver. The mail from the western department was then exchanged, and taken back to Edmonton, and thence to Norway House, along with the Jasper furs.

' The second time of communication was in the autumn, after the Saskatchewan brigade returned to Edmonton in the beginning of September, upon which the officers and men bound for the western department, taking with them the subsidy of otter skins that the Company annually paid the Russian Government for the rent of the N.W. coast, crossed the portage to Fort Assiniboine, then ascended the Athabasca in boats to Jasper House, with pack-horses, reached the boat encampment, and then descended the Columbia to Vancouver, where they arrived generally about the 1st of November. The journey from York Factory or Hudson's Bay to the Pacific coast by this route generally occupied three and a half months, and involved an amount of hardship and toil that cannot be appreciated by those who have not seen boat travelling in these territories.'

Nearly every individual who has left a descriptive record of the Athabaska Pass region seems to have indulged in speculation as to the altitude of the nearby mountains. Thus we find Thompson stating :¹⁹ ' To ascertain the height of the

¹⁹ *Thompson's Narrative of his Explorations in Western America, 1784-1812*, pp. 402-3. See also Note 5.

Rocky Mountains above the level of the Ocean had long occupied my attention, but without any satisfaction to myself. . . . At the greatest elevation of the passage across the Mountains by the Athabasca River, the point by boiling water gave 11,000 feet, and the peaks of the Mountains are full 7000 feet above this passage, and the general height may be fairly taken at 18,000 feet above the Pacific Ocean.'

Washington Irving,²⁰ in his book '*Astoria*,' has preserved a letter which confirms Thompson's idea of great elevation at the pass.

'Columbia College, New York,
'February 23, 1836.

DEAR SIR,—In compliance with your request, I have to communicate some facts in relation to the heights of the Rocky Mountains and the sources whence I obtained the information.

'In conversation with Simon M'Gillivray, Esq., a partner of the North-West Company, he stated to me his impression, that the mountains in the vicinity of the route pursued by the traders of that company, were nearly as high as the Himalayas. He had himself crossed by this route, seen the snowy summits of the peaks and experienced a degree of cold which required a spirit thermometer to indicate it. His authority for the estimation of the heights was a gentleman who had been employed for several years as surveyor of that company. This conversation occurred about sixteen years since.

'A year or two afterwards, I had the pleasure of dining, at Major Delafield's, with Mr. Thompson, the gentleman referred to by Mr. M'Gillivray. I inquired of him in relation to the circumstances mentioned by Mr. M'Gillivray, and he stated, that, by joint means of the barometer and trigonometric measurements, he had discovered the height of one of the mountains to be about twenty-five thousand feet, and there were others of nearly the same height in the vicinity.

'I am, dear sir,

'Yours truly,

'JAMES RENWICK.

'To W. Irving, Esq.'

It may be calculated from this that Thompson made his statement to Renwick about 1822; and, if the material be reliable, it would indicate that Thompson was responsible for

²⁰ *Astoria*, Washington Irving (Philadelphia, 1836), vol. ii. p. 276. Renwick was at this time Professor of Chemistry and Physics at Columbia.

the exaggerated altitudes. At least this dating of his statement precedes the crossing of Athabaska Pass by either Sir George Simpson or David Douglas.

Franchère,²¹ more conservative, comes nearer the truth : 'The geographer Pinkerton is assuredly mistaken, when he gives these mountains an elevation of but three thousand feet above the level of the sea ; from my own observations I would not hesitate to give them six thousand ; we attained, in crossing them, an elevation probably of fifteen hundred feet above the valleys, and were not, perhaps, nearer than half way of their total height, while the valleys themselves must be considerably elevated above the level of the Pacific, considering the prodigious number of rapids and falls which are met with in the Columbia, from the first falls to Canoe river.'

Ross Cox ²² goes to the other extreme : 'The height of the Rocky Mountains varies considerably. The table land which we crossed I should take to be about 11,000 feet above the level of the sea. From the immense number of rapids we had to pass in ascending the Columbia, and its precipitous bed above the lakes, I consider that at their base the mountains cannot be much under 8000 feet above the level of the Pacific ; and from the valley of Canoe River to the level parts of the heights of land cannot be less than 3000 feet, but the actual altitude of their highest summits must be much greater. They are covered with eternal ice and snow, and will probably be forever inaccessible to man.'

Thus we see that by the time David Douglas crossed the pass, in 1827, there was already a well-established tradition as to the exalted heights supposed to flank the Height of Land. Douglas saw the mountains under the snow conditions preceding spring, and this may also have added to his perplexity. Too much blame, therefore, must not be placed upon Douglas as the originator of the over-estimated figures of altitude. At this late date it is probably fruitless to discuss the problem—all that is to be said, has been said ; and not to the satisfaction of everyone—and we had best be content to retain Douglas' accounts of his doings as a charming historic story, and not inquire too earnestly into the facts of the case.

Douglas wrote two journals : a lengthy one, at the time ;

²¹ *Voyage à la Côte du Nord-Ouest de l'Amérique Septentrionale*, p. 299.

²² *Adventures on the Columbia River*, p. 255.

and a shorter, done apparently after his return to England. From the shorter journal we quote: ²³ '... we made a short stoppage to rest ourselves, and then descended the eastern side of the Big Hill to a small round open piece of ground, through which flowed the small or east feeder of the Columbia and the same stream that we left yesterday at the western base of the Big Hill. . . . Near this point we put up at midday. . . . After breakfast, about one o'clock, being well refreshed, I set out with the view of ascending what appeared to be the highest peak on the north or left-hand side. The height from its apparent base exceeds 6000 feet, 17,000 feet above the level of the sea.²⁴ . . . The view from the summit is of that cast too awful to afford pleasure—nothing as far as the eye can reach in every direction but mountains towering above each other, rugged beyond all description; the dazzling reflection from the snow, and the rainbow-like tints of its shattered fragments, together with the enormous icicles suspended from the perpendicular rocks; the majestic but terrible avalanche hurtling down from the southerly exposed rocks producing a crash, and groans through the distant valleys, only equalled by an earthquake. Such gives us a sense of the stupendous and wondrous works of the Almighty. This peak, the highest yet known in the northern continent of America, I felt a sincere pleasure in naming MOUNT BROWN, in honour of R. Brown, Esq., the illustrious botanist, no less distinguished by the amiable qualities of his refined mind. A little to the south is one nearly of the same height, rising more into a sharp point, which I named MOUNT HOOKER, in honour

²³ *Douglas' Journal*, 1823-1827, p. 71.

²⁴ This should be compared with the version in the *Companion to the Botanical Magazine*, William Hooker, 1836, vol. ii. p. 136. The copyist has made remarkable changes: 'Being well rested by one o'clock, I set out with the view of ascending what seemed to be the highest peak on the North. Its height does not appear to be less than 16,000 or 17,000 feet above the sea. After passing over the lower ridge, I came to about 1200 feet of by far the most difficult and fatiguing walking I have ever experienced, and the utmost care was required to tread safely over the crust of snow.'

The map contained in vol. i. is the first on which Mounts Hooker and Brown are shown. The mountains are indicated as flanking the pass on either side. Drummond's route is marked in red, Parry's in blue, and Douglas's in green. The date of publication is October 1829. Letters from Douglas to Hooker show that Douglas superintended this map. (Cf. *Canadian Alpine Journal*, ix. 49-53.)

of my early patron the enlightened and learned Professor of Botany in the University of Glasgow, Dr. Hooker. . . .'

In the longer journal, evidently written on the trail, Douglas shows that his thoughts occasionally wandered far from the work at hand; for he says:²⁵ 'Dreamed last night of being in Regent Street, London! Yet far distant. Progress nine miles.' And the following day, with more accuracy than is observed in the shorter journal: '. . . After breakfast at one o'clock, being as I conceive on the highest part of the route, I became desirous of ascending one of the peaks, and accordingly I set out alone on snow-shoes to that on the left hand or west side, being to all appearance the highest. The labour of ascending the lower part, which is covered with pines, is great beyond description, sinking on many occasions to the middle. Half-way up vegetation ceases entirely, not so much as a vestige of moss or lichen on the stones. Here I found it less laborious as I walked on the hard crust. One-third from the summit it becomes a mountain of pure ice, sealed over by Nature's hand as a momentous work of Nature's God. The height from its base may be about 5500 feet: timber 2750 feet; a few mosses and lichen 500 more; 1000 feet of perpetual snow; the remainder, towards the top 1250, as I have said, glacier with a thin covering of snow on it. The ascent took me five hours; descending only one and a quarter. Places where the descent was gradual, I tied my snow-shoes together, making them carry me in turn as a sledge. Sometimes I came down at one spell 500 to 700 feet in the space of one minute and a half. I remained twenty minutes, my thermometer standing at 18°; night closing fast in on me, and no means of fire, I was reluctantly forced to descend. The sensation I felt is beyond what I can give utterance to. Nothing as far as the eye could perceive, but mountains such as I was on, and many higher, some rugged beyond any description, striking the mind with horror blended with a sense of the wondrous works of the Almighty. The aerial tints of the snow, the heavenly azure of the solid glacier, the rainbow-like hues of their broken fragments, the huge mossy icicles hanging from the perpendicular rocks with the snow sliding from the steep southern rocks with amazing velocity, producing a crash and grumbling like the shock of an earthquake, the echo of which resounding in the valley for several minutes. . . .' Good description for a non-mountaineer; exaggerated of

²⁵ *Douglas' Journal*, 1823-1827, p. 258.

course, but containing no mention of naming the peaks or over-estimation of their altitude as does the short journal. Perhaps the latter, embellished at a later time, had the names and altitudes added as an afterthought; or at least upon information received from outside sources. It seems useless to speculate further.

Archibald McDonald kept a journal of his canoe voyage across the Continent, when, in 1828, he accompanied Sir George Simpson across Peace River Pass. In notes added by Malcolm McLeod, editor of this journal, we find the following reference to Athabaska Pass.²⁶ ' . . . The "Big Athabasca," or Athabasca River proper, draws from the glaciers of Mt. Brown, the highest peak (16,600 feet) of the Rocky Mountains, and also from a much lower height called the Miette, not far from the Leather or Yellowhead Pass. I have seen, but remember not the glaciers that feed this noble river, having once passed them in very early life and once with "thirty feet" of snow after mid April, under foot in the pass (Athabasca Pass), the highway, then, of the Hudson's Bay Company, to the Columbia.'

De Smet, the priest, is most emphatic in his statement: ²⁷ 'Upper Athabasca is, unquestionably, the most elevated part of North America. All its mountains are prodigious, and their rocky and snow-capt summits seem to lose themselves in the clouds. At this season, immense masses of snow often become loosened and roll down the mountains' side with terrific noise, that resounds throughout these quiet solitudes like distant thunder—so irresistible is the velocity of their descent that they frequently carry with them enormous fragments of rock, and force a passage through the dense forests which cover the base of the mountain. At each hour, the noise of ten avalanches descending at once, breaks upon the ear; on every side we see them precipitated with a frightful rapidity.'

Dr. Hector, somewhat in doubt, although more accurate than his predecessors, is influenced by them; for he remarks,²⁸

²⁶ 'Peace River. A Canoe Voyage from Hudson's Bay to the Pacific, by the late Sir George Simpson, in 1828.' *Journal of Archibald McDonald*, edited by Malcolm McLeod (Ottawa: J. Durie & Son, 1872), p. 66, note xxxv.

²⁷ *Oregon Missions and Travel over the Rocky Mountains in 1845-46*, Father P. J. De Smet, p. 197.

²⁸ *The Journals, Detailed Reports, and Observations relative to the Exploration by Captain Palliser*, p. 149.

‘ . . . I am inclined to think that none of the Rocky Mountains rise above 13,000 or 13,500 ft., and that my estimate of the height of Mt. Murchison, which I made last year, is too great.’

In the foregoing pages we have the opinion of actual travellers, eyewitnesses, regarding the mountain heights of the upper Columbia Valley and of the Athabaska Pass area. Too much credence should not be given to the hearsay evidence embodied in the work of contemporary writers.²⁹ Let us now turn our attention to the actual facts of the topography as it is known at the present time.

III. *Mountain Topography Adjacent to Athabaska Pass.*

The Whirlpool Group occupies the rough triangle enclosed between the Whirlpool and Athabaska Rivers on the W. and E., and by Fortress Lake and Wood River on the S. It includes the portion of the Continental Divide between Fortress and Athabaska Passes, an air-line distance of 20 miles, and its continuation to Whirlpool Pass. The air-line between Athabaska and Whirlpool Passes is eight miles.

Most of the area is covered by Sheets 25, 26, and 27 of the Interprovincial Boundary Survey, although the Whirlpool-Athabaska junction and the peaks immediately in the angle are not included. In fact the northern tip of the group, although visible and but a day's trail-riding from Jasper, has yet to be mapped. In this angle are two good peaks, known by local names, the easterly ‘Mt. Derelict,’ and the western the ‘Whirlpool Mtn.’ South of the latter, with its

²⁹ Thus we find in Greenhow—*Memoir Historical and Political on the North-west Coast of North America and Adjacent Territories*, Robert Greenhow (Washington: Blair & Rives, 1840), p. 11—the following: ‘The highest points in the Rocky Mountains, if not in the whole western continent, are those about the 53rd degree of latitude, near the northernmost sources of the Columbia River. Mr. Thompson, of the Hudson's Bay Trading Company, has measured several of these peaks, of which one, called *Mount Brown*, is estimated by him at sixteen thousand feet, and another, *Mount Hooker*, as fifteen thousand seven hundred feet above the ocean level. It has been stated that this gentleman has recently found other peaks further north, which he considers to be more than ten thousand feet higher than either of the ones above mentioned.’ For a discussion of the errors in this passage, see *C.A.J.* ix. 52.

Consult also *The Wild North Land*, W. F. Butler (Montreal, 1874), Appendix, p. 347.

upper crags visible from Jasper above the eastern shoulder of Mt. Edith Cavell, is Mt. Fryatt, 11,026 ft., one of the outstanding mountains of the Park. Other peaks, E. of the Divide, included in the mapped area, are Mt. Lapensée, 10,190 ft., and Mt. Belanger, 10,200 ft., just S. of Mt. Fryatt; while further E., Mt. Christie, 10,160 ft., and Brussels Peak, 10,370 ft., culminate a sub-group toward the Athabaska. S.E., only a few miles N. of Fortress Mt., Mt. Catacombs, attaining 10,800 ft., is the chief peak in this direction.

From Fortress Pass, 4388 ft., and Fortress Mtn., 9908 ft., the Divide westward includes no peaks of importance as far as the head of Alnus Creek. At the western end of Fortress Lake, Alnus Valley enters Wood River at an acute angle from the N.W. At the head of Alnus Creek, low passes lead over to Divergence Creek, a Whirlpool tributary, and form a major trench extending through the Whirlpool Group.

It is chiefly with the area W. of Alnus and Divergence Valleys that the present paper is concerned, this portion of the group containing important peaks and many of the finest scenic features.

At the head of Alnus Creek, on the Divide, is Divergence Peak, 9275 ft., whence the watershed swings sharply southward, crossing the summits of Alnus Peak, 9763 ft.; Mt. Ross Cox, 9840 ft.; Mt. Scott, 10,826 ft.; Mt. Oates, 10,220 ft.; and Mt. Ermatinger, 10,080 ft. The watershed now swings abruptly westward, crossing Mt. Hooker, 10,782 ft., and dropping across McGillivray Ridge, descends to Athabaska Pass.

This division of the group, it will be seen, lies between terminal sources of Whirlpool River and Wood River. On the British Columbia side of the Divide, Mt. Serenity, 10,573 ft., connected by spurs with the main watershed between Mts. Ermatinger and Hooker, fills in the great angle formed by Alnus Creek with Wood River.

On the Alberta side of the watershed, Mt. Evans, 10,460 ft., and Mt. Kane, 10,000 ft., rising above the valley of the Whirlpool, form supporting buttresses for the immense basin of the Hooker Icefield, nearly twelve square miles in area, discharging through the icefalls of Kane and Scott Glaciers as a chief source of Whirlpool River.

The Hooker Icefield is spread across on to the British Columbia side of the watershed and includes perhaps another ten square miles: a total of from twenty to twenty-five square miles. Nearly a dozen small tongues discharge their streams southward into the gorge of Wood River, between

Long. 118° 19'



Scale
Red

Serenity Creek and Athabaska Pass. North of and partially walled in by Mt. Serenity, the S. and N. Alnus Glaciers—of the alpine winding type—descend from the slopes of Mts. Ermatinger, Oates, and Scott, to form sources of Alnus Creek.

Between Mt. Hooker's eastern wall and the point S. of Mt. Ermatinger where the western arête of Mt. Serenity joins the watershed, there is a conspicuous pass, of relatively flat snow, about 8700 ft. in elevation, leading across the Continental Divide.

The air-line distance between Divergence Pk., at the head of Alnus Creek, and the Committee Punch Bowl on Athabaska Pass, is 12 miles. On the Athabaska Pass summit, 5736 ft., are the Punch Bowl and two other adjacent lakelets, giving rise to terminal sources of the Whirlpool River on the E., and Wood River, through Pacific Creek, on the W.

The Continental Divide continues from the pass, rising westward to the summit of Mt. Brown, 9156 ft., thence turning northward and dropping to the icy lakes at the head of Robert Creek, and to Canoe Pass, 6722 ft., connecting Whirlpool River with a branch of Canoe River. Crossing Mallard Mtn., 9330 ft., the Divide reaches Whirlpool Pass, 5936 ft., linking the Middle Whirlpool with the Mazama Creek branch of Canoe River. It will thus be seen that there are no peaks of importance immediately W. of Athabaska Pass and the Whirlpool: the Divide is relatively low and can be crossed at several points. The feature to be noted is the large area of glacier and snowfield on the S.W. side of Mt. Brown, extending into the angle between Wood and Canoe Rivers. The Continental Divide bends considerably in rounding the head of Whirlpool River, consequently the air-line distance between Divergence Pk. and Whirlpool Pass is only about eight miles, practically equal to the distance between Athabaska and Whirlpool Passes.

IV. *Mountaineering.*

The early days of mountaineering in the Canadian Rockies began when there was yet no railroad through Yellowhead Pass; consequently most expeditions, at that time, started from points on the Canadian Pacific Railroad.

Coleman³⁰ and his companions are responsible for the early enthusiasm resulting in the repeated searches for the mysterious

³⁰ *The Canadian Rockies, New and Old Trails*, A. P. Coleman (T. Fisher-Unwin. London, 1911), pp. 79, 147, 170.

high peaks of the Athabaska Pass. In 1888 they attempted to enter the region by way of the Columbia Loop, and actually reached Kinbasket Lake before abandoning the enterprise. In 1892 a second attempt, by way of North Saskatchewan and Athabaska headwaters, led them to Fortress Lake—which, but for the absence of Mts. Hooker and Brown, and the discrepancy in the size of the lake, might have been the Committee Punch Bowl.

In 1893 a third expedition, led by Coleman, successfully reached the Athabaska Pass. The highest mountain on the western side of the pass was ascended, and was considered to be the peak which Douglas climbed. They also ascended McGillivray's Rock, the point where Mt. Hooker is indicated on the Palliser map, but noted that 'a much higher, finer peak rises a few miles E. of the Punch Bowl, with fields of snow and a large glacier, and was estimated at about eleven thousand ft.' Because of the small size of the Committee Punch Bowl, a folding canvas boat, intended for use in rowing around the lake, remained in its pack-cover!

None of the other early expeditions actually reached Athabaska Pass, although the search for the high peaks was by no means given up. Wilcox³¹ and Barrett, in 1896, reached Fortress Lake. Wilcox triangulated the massive glacier-bearing peak to the W.—the present Mt. Serenity—at 10,500 ft. Habel,³² the German explorer, in 1901 spent several days near the lake and mentions Mt. Serenity as 'a very prominent snowy mountain, visible nearly from top to bottom, in shape similar to Mont Blanc.'

Collie,³³ who came out from England first in 1897, became interested in the Brown-Hooker problem. In those days, knowledge of the topography was so imperfect that it was thought that the North Fork of the North Saskatchewan had its source in the neighbourhood of Athabaska Pass.³⁴ Collie

³¹ *The Rockies of Canada*, W. D. Wilcox (G. P. Putnam's Sons. New York, 1909), p. 139.

³² 'At the Western Sources of the Athabasca,' Jean Habel, *Appal.* x., 1, p. 28.

³³ *Climbs and Exploration in the Canadian Rockies*, H. E. M. Stutfield and J. N. Collie (Longmans, Green & Co. London, 1903).

³⁴ The writer has recently examined the mountaineering letters of the late C. S. Thompson, a well-known climber of Canadian peaks. In the collection are a number of letters from Collie, with pencilled sketch maps, drawn in 1900, indicating the Athabaska Pass area as



McGILLIVRAY'S ROCK AND NORTHERN ENTRANCE TO
ATHABASKA PASS.



PACK-TRAIN ARRIVING AT THE COMMITTEE PUNCH
BOWL, ATHABASKA PASS.

Photo. J. Monroe Thorington.



SCOTT GLACIER AND MT. HOOKER,
from camp-ground on Whirlpool River, whence first ascents of Mt. Oates and
Hooker were accomplished.



MT. EVANS AND MT. OATES,
from Old Hudson's Bay camp-ground in the Whirlpool Valley. This was the
probable site of the Encampment de fusil, some nine miles below Athabaska Pass.

Photo. J. Monroc Thorington

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had seen high peaks in the north, from the slopes of Mt. Freshfield, and, in 1898, visited many of them by way of the North Saskatchewan. The Athabaska Pass was not reached, but the climbers had their reward in the discovery of the huge Columbia Icefield.

Following the visit of Coleman, the next attempt at mountaineering from the pass was made, in 1913, by Howard and Mumm,³⁵ accompanied by the guide Moritz Inderbinen. On the way in from Jasper, minor summits were attained; but in the immediate vicinity of Athabaska Pass the weather became so unfavourable that little could be done. Mumm and Inderbinen ascended Mt. Brown and visited the Scott Glacier.

The first ascent of importance was that of Mt. Serenity, 10,573 ft., made from Fortress Lake, in 1920, by Carpe,³⁶ Palmer and Harris. The route to the summit, by way of the Serenity Glacier and the southern arête, required ten hours from a camp at the glacier tongue.

In 1920 the Interprovincial Boundary Survey³⁷ visited

being at the head of the North Saskatchewan River. This impression seems to have been derived from preliminary sketch maps by Dr. Hector, of the Palliser Expedition, made before the final Palliser map (in the folio report) was issued.

³⁵ 'The Whirlpool (1913),' G. E. Howard and A. L. Mumm, *C.A.J.* vi. 74. The article is accompanied by a sketch map, the nomenclature of which has been superseded by, but partially adopted on, Interprovincial Boundary Survey Sheets 26 and 27.

³⁶ 'The Mountain West of Fortress Lake,' A. Carpe, *C.A.J.* xii. 179.

³⁷ 'The Location of Mts. Brown and Hooker,' A. O. Wheeler, *C.A.J.* xii. 163. The work of the Survey in the Athabaska Pass area is described and reasons given for adopting its nomenclature in regard to Mts. Brown and Hooker.

It is not the purpose of the present paper to enter into or further complicate the literature of the Hooker-Brown problem. In addition to references already given, one should consult the interesting paper, 'New Light on Mounts Brown and Hooker,' E. W. D. Holway, with supplementary note by James White, *C.A.J.* ix. 45.

Those interested in the region should also consult two additional papers:

- (a) 'Characteristics of Passes in the Canadian Rockies,' R. W. Cautley, *C.A.J.* xiii. 155.
- (b) 'Athabaska Pass to Tonquin Valley, via Goat and Fraser Rivers,' D. Phillips, *C.A.J.* xiii. 209.

Mr. Cautley describes, among other things, the discovery, just north of the pass summit, of the musket-balls lost by David

Athabaska Pass and established the nomenclature of Map Sheets 26 and 27. A large number of stations were occupied, including Mt. Brown, McGillivray Ridge (Mt. Brown E.), Alnus and Divergence Pks.

The Interprovincial Survey Commission has published³³ the following conclusions in regard to the Hooker-Brown problem :

'*Mt. Brown.*—The mountain ascended by Douglas and named Mt. Brown by him is the one rising directly on the W. side of the pass summit, the altitude being 9156 ft., 3405 ft. above the pass.

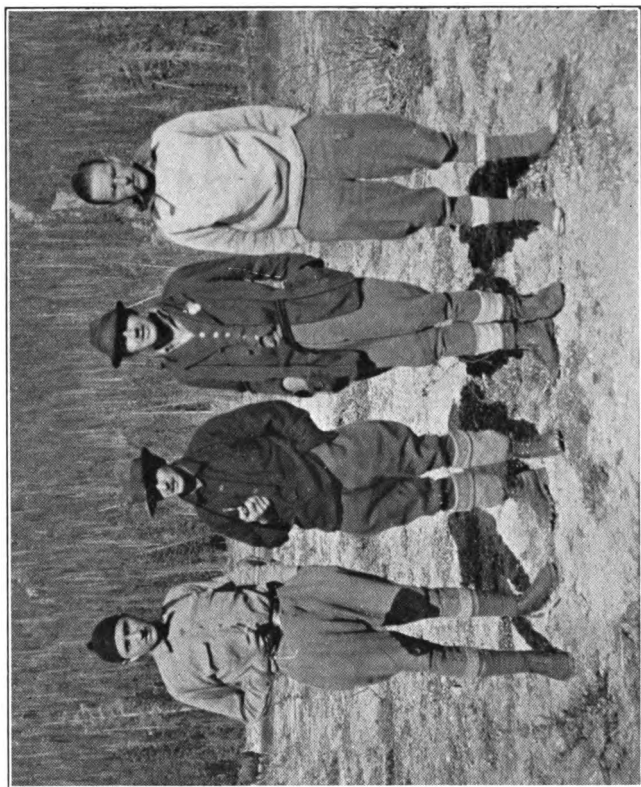
'*Mt. Hooker.*—The location is not so clear. Douglas writes in his journal, (1) "A little more to the S. is one nearly the same height, rising more into a sharp point which I named Mt. Hooker." (2) "I set out with a view of ascending what appeared to be the highest peak on the N. or left-hand side." Against these statements is the fact that the direction of the valley at the summit of the pass is practically N. and S. and consequently Douglas' "N. or left-hand side" would truly be "W. or left-hand side"; so also with reference to Mt. Hooker, "a little to the S. is one nearly the same height" would truly be "a little to the E. is one nearly the same height." Douglas' idea of his direction seems to have been as inaccurate as his idea of altitude. On a bearing 18° N. of E. lies a peak, rising into a sharp point, which is distant approximately six miles from the summit of Mt. Brown and which has an altitude of 10,782 ft., or 1626 ft. more than that of Mt. Brown. It seems more likely that this is the mountain Douglas refers to as Hooker. (This is the mountain seen by Coleman and Stewart, and estimated at 11,000 ft.)

Thompson a hundred and ten years before. Thompson mentions the incident. 'Sent the men to collect and bring forward the Goods left by the Way; which they brought except five rounds of Ball, which being in a leather bag, was carried away by a Wolverine' (*Thompson's Narrative*, p. 449). Mr. Cautley's paper is especially valuable as being the first to describe accurately many of the passes of the Canadian Rocky Mountains.

Mr. Phillips' paper includes interesting route data concerning trail approaches to Athabaska Pass.

It may be added that the mountaineering to date, with a summary of early expeditions and history of the region, and notes on the topography, will be found in *A Climber's Guide to the Rocky Mountains of Canada*, H. Palmer and J. M. Thorington (The Knickerbocker Press. New York, 1921), pp. 131-43.

³³ C.A.J. xii. 163, 179.



Members of Expedition.

M. M. STRUMIA.	J. M. THORINGTON.
CONRAD KAIN.	A. J. OSTHEIMER

‘From the vicinity of Fortress Lake this mountain peak stands up in a sharp white cone. It is not conceivable that the long, evenly crested ridge rising directly above the Punch Bowl from Athabaska Pass summit has anything to do with the question (i.e., McGillivray’s Rock). It was, therefore, recommended to the Geographic Board that the 10,782 ft. peak about six miles easterly from Mt. Brown be confirmed as Mt. Hooker, which has been done.’

The writer’s expedition in 1924, details of which follow, is the third to reach the Athabaska Pass for purely mountaineering purposes. Within a short space of time we were able to make the first ascent of Mt. Hooker and other peaks of the vicinity, and to explore the intricacies of the Kane and Hooker Icefields, as well as the vast topography of the Mountains of the Whirlpool.

V. Expedition of 1924.

With fourteen horses, furnished by the well-known outfitter Donald Phillips, our party, including Mr. A. J. Ostheimer and Dr. M. Strumia, of Philadelphia, the writer, and the guide Conrad Kain, left Jasper on June 26, bound for Athabaska Pass. In charge of the horses came David Moberly, a Cree breed, grand-nephew of Walter Moberly, who years before served as locating-engineer for the Canadian Pacific. Our cook, Jack MacMillan, had assisted his father in building the first trails to Emerald Lake, and had worked for Tom Wilson in the old days.

By road leading across the Miette bridge, towards the snows of Mt. Edith Cavell, we started up the Athabaska Valley, a broad trail bringing us to the mouth of Whirlpool River, the stream which we were to follow to its southern sources. Here was the location of the old ford—la Grand traverse—by which the voyageurs crossed to the Prairie de la Vache, or Buffalo Prairie, on their way to Jasper House.

Past the snow-powdered crags of Mt. Kerkeslin, through a broad valley, there are glimpses of distant peaks on the Sun Wapta and the Chaba; while looming in the Athabaska-Whirlpool angle, companion to the dark towers of Mt. Derelict, the precipices and pinnacles of the ‘Whirlpool Mountain,’ grim and repellent, with an enormous western gendarme, hide the towering mass of Mt. Fryatt, the loftiest peak of the Whirlpool Group.³⁹ Through a small lumber-camp, where railroad-ties

³⁹ For a description of the eastern appearance of the Whirlpool Group from the Athabaska Valley, see *C.A.J.* xiii. 81.

are cut and floated down to Jasper, we passed and camped by the Whirlpool, quiet pools nearby reflecting Needle Peak, guardian of the entrance to Simon Creek—the old ‘North Whirlpool.’ Across the river, sunset colouring of the range blends with the dull, glowing embers of our camp-fire; soft wind-music in the jack-pine tops; rush of the river; distant bells tinkling—first days on the trail are well remembered.

Mt. Fryatt. 11,026 ft. Attempted Approach.—The second elevation in the central area of Jasper Park ⁴⁰ has long been recognised by mountaineers as a mountain difficult to approach. It is at best a formidable-looking peak, and, rising so much above its neighbouring valleys, climbers have left it severely alone. The Interprovincial Survey had photographed it from the south-west, from the head of Alnus Creek, revealing the presence of three attractive lakes and high meadows at the sources of Divergence Creek, the Whirlpool tributary immediately west of Mt. Fryatt.

On June 27 we crossed the Whirlpool by a lumber-camp bridge, and attempted to take our horses up the creek west of the ‘Whirlpool Mountain,’ to a low pass leading over to the head of Divergence Creek, where we were desirous of making a high camp. We were unsuccessful in our effort. At an elevation of less than 6000 ft., canyons and cut-banks make the creek bed impossible for horses; it would have been necessary to spend one or two days cutting trail through the high timbered shoulder on the W. bank of the stream. While we were investigating the route, several restless pack-horses succeeded in dislodging one of their fellows over a low rock ledge, the horse turning a complete somersault and landing head downward in the water. It required quick and skilful work on the part of the guides to cut the pack-ropes and prevent the struggling animal from drowning. As usual, more damage was done to the packs than to the horse; but the delay assisted our decision not to proceed further.⁴¹ So we recrossed the

⁴⁰ The altitude of Mt. Edith Cavell is 11,033 ft., and it is usually considered the highest point within the Park. This is, however, not true if the southern boundary of the Park be made to include any of the higher peaks of the Columbia Group.

⁴¹ It is a pleasure to acknowledge the many courtesies extended to our party by Colonel S. Maynard Rogers, Superintendent of Jasper Park. We are also indebted to Warden P. H. Goodair for assistance rendered during our stay in Area No. 10.

Whirlpool and camped on a terrace by an old cabin, not far from the mouth of Simon Creek. Later, on our return, we found that a sudden rise of water had carried away the Whirlpool bridge, and future visitors, approaching Mt. Fryatt from this direction, will cross a difficult ford.

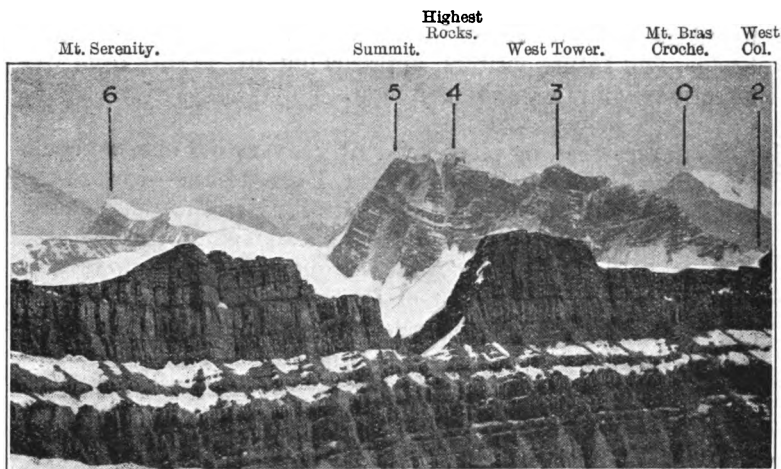
From our camping place, evidently a very old one, we could see far sunlit peaks—Scott, Hooker, Evans, Kane—toward the head of Whirlpool River. How thrilling is the anticipation aroused by the first distant view of an unexplored group!

Morning came, brilliant after a night of heavy showers. In two hours we had forded Simon Creek, happily without wetting any packs. Then over parallel timbered ridges, with intervening muskeg and shallow reedy ponds, emerging on river-flats opposite the ribbed cliffs of Mt. Scott, with new snow melting and sparkling. Then into the timber again, arcaded groves of cottonwood, with the Middle Whirlpool coming down unceremoniously, with no apparent bed of its own, but spreading about the gnarled tree-roots, and the pack-train splashing through. It was as if one wandered in a splendid irrigated garden, a garden of primeval trees with tops so interlaced that only here and there might shafting sunlight penetrate the forest shadows.

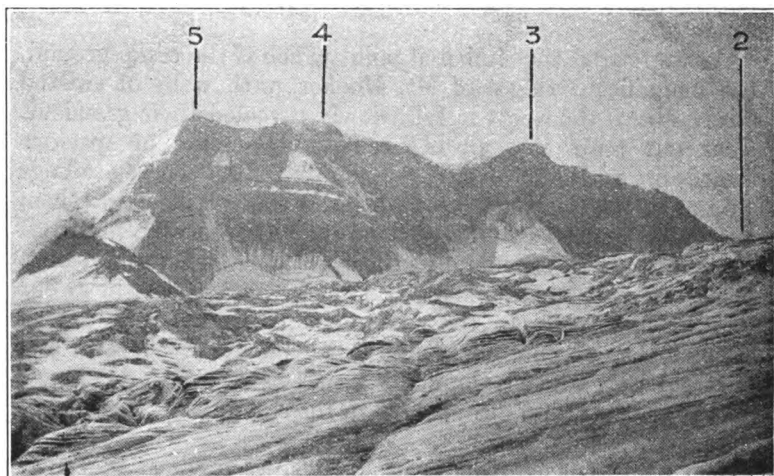
As we neared the timbered point which is the camp-ground, the magnificent ridges of Mt. Hooker, with walls of twisted strata above the Scott icefall, slowly revealed their grandeur. Near our tents was an old roofless log-cabin, of spacious dimension, with hand-forged nails in its walls. There are huge stumps in the clearing, so rotted that a touch will topple them over. We picked up bits of hand-made boxes with marks of the Hudson's Bay Company still legible. Not far away, on a bit of cliff, four goat looked down in silent astonishment at our caravan's arrival. In the evening, white-tailed deer passed close to the campfire on their way to the river: graceful and unafraid they moved along the gravel-bars, from one silvery pool to another, and disappeared in the sun-glint at the edge of the bush.

The Scott Glacier will be much visited in days to come, because of the tremendous spectacular icefalls in which it plunges down to the valley level, to spread in a broad flat tongue toward the wooded morainal fans far below timber-line. We passed close below it on our next day's travel and were to know it better within a short time. The upper névé spreads below the northern wall of Mt. Hooker, and one must journey

far in the Canadian Rockies to find ice scenery which can



MT. HOOKER FROM THE N.W., FROM THE SUMMIT OF MT. KANE.
(Labelled points correspond with companion pictures.)



MT. HOOKER AND THE HOOKER ICEFIELD FROM THE TOP OF THE SCOTT GLACIER.

Lateral distance between points 2 and 5 is about one and a half miles.

compare with the wild splendour of this view. The western margin of the glacier is flanked by the symmetrical rock peak

of Mt. Evans, contrasting with the sheer snowy wall of Mt. Kane just beyond and resembling the southern portion of the Victoria ridge above Lake Louise. From the col between Evans and Kane, a slender precipitous icefall hangs in apparent defiance of the laws of gravity, its stream ending in an airy waterfall spraying into a rock-bowl close to the trail.

Rounding the shoulder of Mt. Kane, trail leads through evergreen timber, thickets of pussy-willow, and patches of spring snow. Crowded clusters of anemones and avalanche-lilies press up through the melting margins—in the shadow of McGillivray's Rock, with the snows of Mt. Brown ahead, we enter on the Athabaska Pass. The valley broadens above the gorge at the foot of Mt. Kane, snow becomes deeper, entirely covering the trail; pack-horses floundering at first, gradually gain confidence in the footing. A gaunt cariboo stalks up and over a nearby ridge, moving so slowly. How surprising it was to reach the summit lakes on the pass and stop by the central one—the Committee Punch Bowl! There was a skim of ice on the water, too cold for bathing, and—unlike Coleman—we had not brought a canvas boat; but one of us can at least be credited with having swum a horse across the Great Divide!

The lakes are desolate, lonely tarns and in winter may be entirely covered. Of course there are no lofty mountains on either side, and one is almost at loss to pick out Mt. Brown, for on the western side of the pass are several summits all about equal in height and resembling each other in outline. It is all so plain in 'Douglas' Journal'; a visit to the pass is the confusing thing. A traveller of to-day, writing on the spot, could never describe the pass and its peaks in Douglas' words—the journal and the lay of the land simply do not agree. The mystery remains.

On account of the snow, we placed camp on Pacific Creek about a mile below the pass summit, with a group of serrated splintered peaks in view down the valley of Wood River.

Mt. Kane. 10,000 ft. First Ascent.—On June 30 we left camp (5.20), hoping to reach Mt. Hooker. Following the N. margin of the glacier tongue coming from the shoulder of McGillivray's Rock and the Kane Icefield, in two hours we had reached the upper snows. But on crossing to a higher ridge of the Divide, at 9300 ft., we found ourselves cut off from Mt. Hooker's southern wall by an impassable snow precipice, overhung with cornices and dropping to the broken Wood River glaciers of the Hooker Icefield. The arête connecting with

Mt. Hooker rises into an intervening peak which would have to be traversed and forms a route impossibly long for a single day. So realising that we were defeated, we followed our ridge northward and tramped the long stretches of snow to the Kane-Evans col, which we reached over a small schrund and up some slabby chimneys. We were now at the head of the hanging glacier which is so striking in appearance when seen from the Whirlpool, and upward over snow and ledges made our way to the summit (2.08).

A little to the S.E. there is a break in the banded rock-wall separating the Kane Glacier and Hooker Icefield, affording a possible approach to Mt. Hooker; but from Athabaska Pass it will be a very long journey. Beyond the N. face of Mt. Hooker the view extends to far-away Athabaska sources, with Mt. Alberta, The Twins, and Mt. Columbia, stupendous even through the distances.

The Wood River Group is seen from an unusual angle and presents a fine array of glacial cirques on the N.W., by which the flat upper snows of Mt. Bras Croche might be reached and other peaks explored. Yet one hesitates to recommend a visit by way of Athabaska Pass and the low, timbered reaches of Wood River.

The northern snows of Mt. Kane, so steep they are, seem to overhang the Whirlpool. Far beyond the Rampart Group and southern Fraser sources, our gaze was held by Mt. Robson. Towering nearly two thousand feet above its highest neighbours, its elevation emphasised by low surrounding valleys, one is yet attracted more by the mountain's isolation than by its appearance of height. No great group masks its precipices. From our viewpoint the peak is a steep pyramid, slightly blunted in the summit ice-cap, a streaming glacier continuous with the névé in a vertical height of nearly 4000 ft., and the S.E. shoulder, conspicuous from the Grand Forks Valley, so foreshortened as to be almost unrecognisable.

The west is a chaos of unravelled topography: the northern peaks of the Columbia Loop, the Fraser-Canoe divide, the Gold Range, the Cariboos, and far peaks of the main Fraser Valley. Long familiarity with the main chain of the Canadian Rockies cannot dull the overwhelming sense of hopeless awe aroused by the extent of those unnamed western peaks.

It is not easy nor profitable to describe precisely the Kane traverse. Suffice it to say that the arête west of the summit affords a delightful climb of several hours, with work which does not lack in excitement. The snow ridges encountered

are quite narrow, with airy drops to the Whirlpool Valley ; the arête possesses a blunt central tower, with opportunity for interesting hand and friction traverses on the southern slabs. A last curling ladder of snow leads to scree slopes and broken rock descending to the glacier. And so we walked home across the Kane Glacier, in the lengthening shadow of McGillivray's Rock, and the evening glow on the ranges beyond Wood River. (Camp 8.20.)

Mt. Brown. 9,156 ft.—On July 1 we wandered up Mt. Brown, past ice-glazed lakelets on benches of snow, like gigantic steps, above the Committee Punch Bowl. Then following the eastern margin of the Brown Icefield, we took what climbing we could find—rope was unnecessary—and were soon walking up the long shale ridge to the top. (9.45–2.45.) Our time was slow, for the day was blistering hot and we were a lazy lot. Still, it makes one doubtful whether David Douglas, under winter conditions and with limited time due to a late start, could have reached this particular summit.⁴²

The Brown Icefield drains to Canoe River and to Wood River ; the peaks on its western margin are most attractive and should preferably be reached from a camp at the head of Jeffrey Creek. The unnamed pass through the Divide, immediately north of Mt. Brown, deserves a visit ; three lakes, icy and varying in hue, form the source of Robert Creek and drain to Canoe River. The Wood River and Columbia Groups are practically in line, Mt. Alberta and The Twins visible, but Columbia hidden by square-topped Bras Croche. Two hours passed ; cameras clicked busily, pipes were smoked, we snoozed in the sunlight. The view delighted us—we could not think of it as being ' too awful to afford pleasure.' In another two hours (4.45–6.50) we had glissaded back to the camp-fire ; in fact it had been difficult to find a spot free of snow on which to pitch our tents.

On July 2, feeling that we had made a satisfactory reconnaissance of the pass and its surroundings, we returned down the Whirlpool and camped near the Scott Glacier, beside a shallow lake in the wooded moraine. It was a day of travel when Nature seemed pleased to show us her valley inhabitants—the soaring eagle that guards the rock of McGillivray ; a lonely startled duck skittering across the Punch Bowl ; marmots playing and boxing in sunny snow-patches beside the balsam trees. Flowers everywhere, coming up through melting snow ;

⁴² Cf. Mr. Mumm's opinion, *C.A.J.* vi. 90.

lilies and anemones, violets and bluebells, columbine and heather; Dave, our Indian, riding ahead with an enormous bouquet nodding from his hat.

Mt. Oates. 10,220 ft. First Ascent.—After a night of thunderstorms, the morning of July 8 cleared slowly after a threatening dawn. We made a late start (9.30), expecting only to prospect the Scott icefall for a route to the upper basin. Our camp in the Whirlpool Valley was quite low, 4500 ft., and it was for this reason that we had first investigated the higher level of Athabaska Pass. We now had our tents within a quarter mile of the ice, and soon passed the huge isolated boulders of the terminal debris, and were on the flat tongue. The nearly level ice can be traversed for about a mile, and the eastern moraine, below Mt. Scott, brings one almost to 7000 ft. before it becomes necessary to rope and take to the ice again.

The glacier plunges down from the Hooker névé, at an elevation of 8000 ft., through the portal between Mts. Evans and Scott, with a width of nearly a mile. The fall is extremely broken, with gigantic séracs on the verge of tumbling. A fragmentary medial moraine is formed through the erosion of a buttress, partially exposed in the middle of the icefall, at which level there is a lessening of the ice-slope before the final drop to the bulbous tongue.

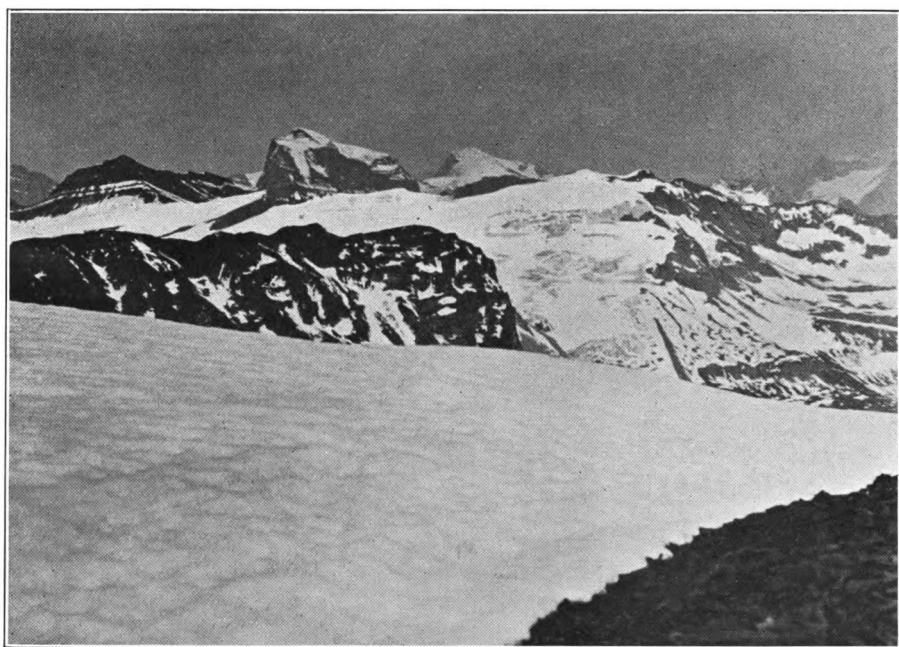
From our roping place, one ascends another thousand feet before reaching the Hooker Icefield in the extensive basin between Mts. Evans, Hooker, Ermatinger, Oates, and Scott. This entails a good deal of step-cutting and some careful ice-manship. (1.30.) The basin is more than three miles across, and from cols in its bounding ridges—the eastern and southern are Continental Divide—other icefalls, all badly shattered, pour in until the field presents a wild scene of broken séracs and unsupported pinnacles over an extended area. There is very little in other Canadian icefields of the main chain with which to compare it; one thinks rather of the northern glaciers of Mont Blanc as they come down from the Grand Plateau, but the Hooker Icefield gives an impression of greater breadth and breakage.⁴³

Turning eastward and rounding the cliffs of Mt. Scott, our

⁴³ *C.A.J.* vi. 90. Mr. Mumm writes, 'We were in the centre of an immense battlemented cirque, and straight ahead of us, in particular, stood out against the sky the most menacing array of towers and pinnacles that I have ever seen.'



N. FACE OF MT. SERENITY (10,573 FT.), from Mt. Oates.



HOOKER ICEFIELD FROM THE SUMMIT OF MT. BROWN.
McGillivray's Rock rises above the foreground snow, with Mt. Hooker above
and Mt. Serenity to its right.

lilies and anemones, violets and bluebells, columbine and heather; Dave, our Indian, riding ahead with an enormous bouquet nodding from his hat.

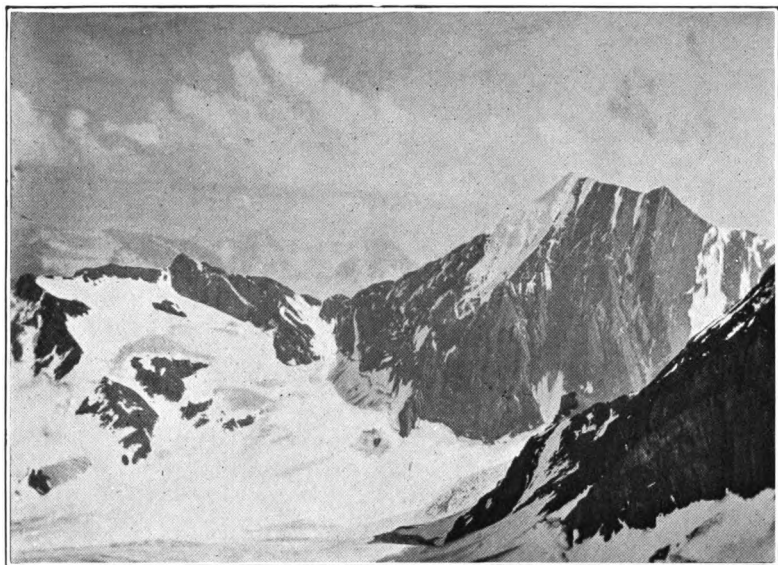
Mt. Oates. 10,220 ft. First Ascent.—After a night of thunderstorms, the morning of July 3 cleared slowly after a threatening dawn. We made a late start (9.30), expecting only to prospect the Scott icefall for a route to the upper basin. Our camp in the Whirlpool Valley was quite low, 4500 ft., and it was for this reason that we had first investigated the higher level of Athabaska Pass. We now had our tents within a quarter mile of the ice, and soon passed the huge isolated boulders of the terminal debris, and were on the flat tongue. The nearly level ice can be traversed for about a mile, and the eastern moraine, below Mt. Scott, brings one almost to 7000 ft. before it becomes necessary to rope and take to the ice again.

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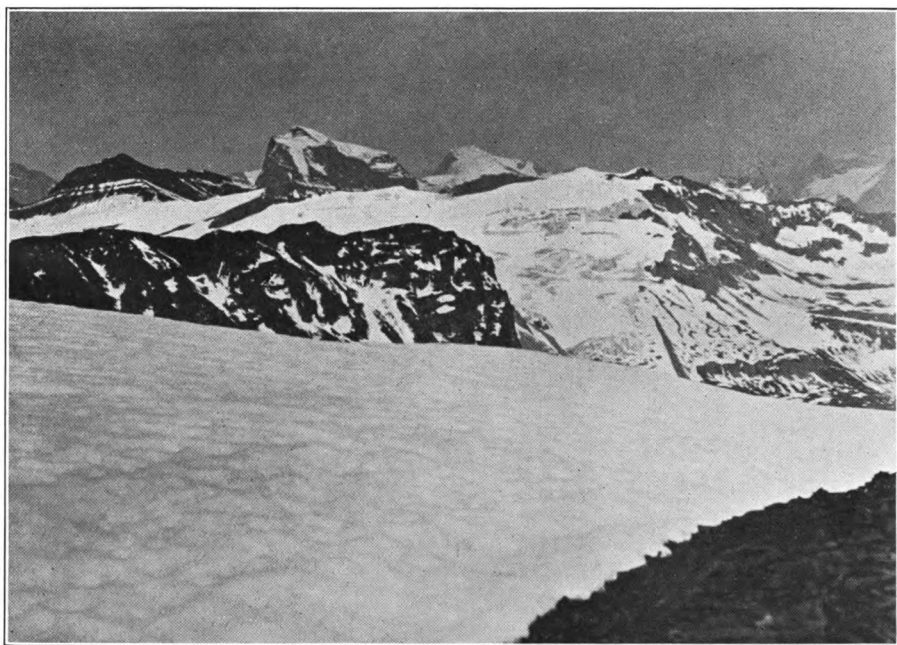
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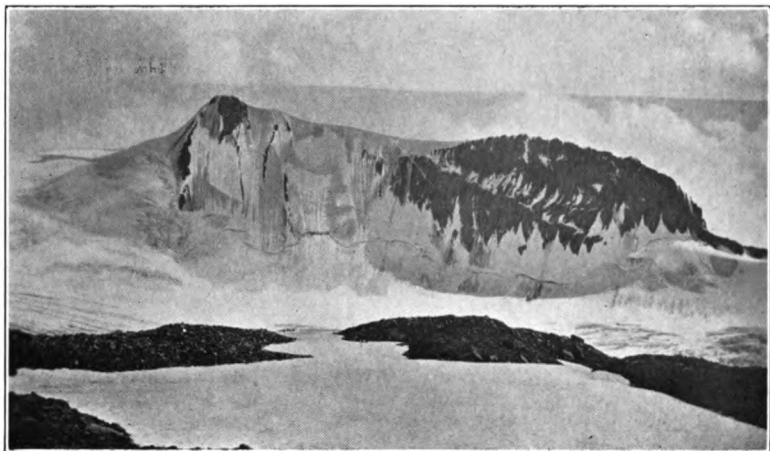
⁴³ *C.A.J.* vi. 90. Mr. Mumm writes, 'We were in the centre of an immense battlemented cirque, and straight ahead of us, in particular, stood out against the sky the most menacing array of towers and pinnacles that I have ever seen.'



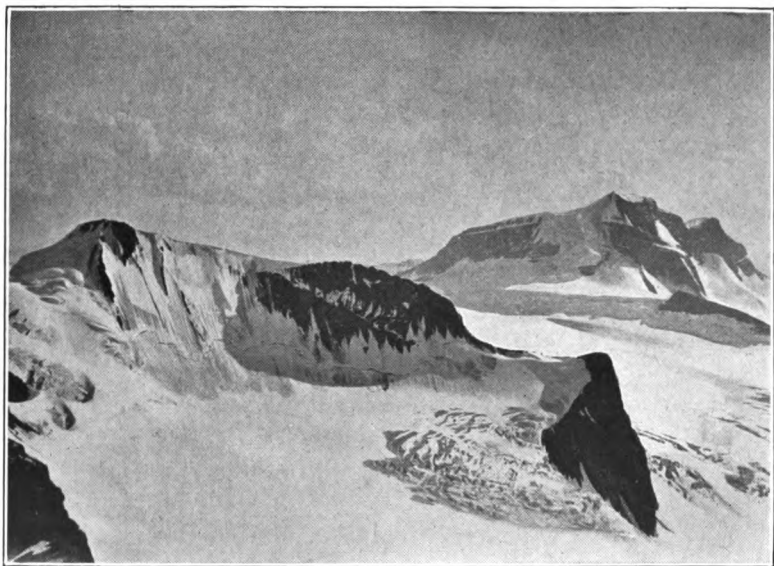
N. FACE OF MT. SERENITY (10,573 FT.), from Mt. Oates.



HOOKE ICEFIELD FROM THE SUMMIT OF MT. BROWN.
McGillivray's Rock rises above the foreground snow, with Mt. Hooker above
and Mt. Serenity to its right.



MT. ERMATINGER (10,080 FT.) from the North.



MT. ERMATINGER AND MT. HOOKER, from Mt. Oates.

way lay across a flat of snow, toward a tumultuous waterfall, a broad gully of shale bringing us quickly to an upper snow plateau between Mts. Scott, Oates, and Ermatinger. (2.15.)

Mt. Ermatinger is a mountain of inspiring beauty : a long, knife-edged arête, rising from the Hooker Icefield in a jagged crest of uptilted rock strata, continuing into the north face and merging with a sheer, fluted wall of shining, green ice. The ice-wall is nearly a thousand feet high, broad and unbroken ; in our combined experience we could think of but few so glorious. More than anything else it suggested the oncoming mass of a curling sea-wave, about to break and with the sunlight in its crest. Had time and weather permitted, it would have been ours within a few days, the difficulties being easily avoidable. We passed it by with regret, envying those who will first stand on its lovely heights.

We had still the opportunity of making a climb and it was necessary to decide upon the most accessible peak. We had been heading for what seemed to be the highest of the group, believing it to be Mt. Scott. The peak adjoining Mt. Ermatinger on the north we took to be Mt. Oates ; but on closer examination of the ground we saw that this is a lower, unnamed summit—which will give someone a strenuous climb—and that the peak we were approaching was really Mt. Oates. We climbed to a little col overlooking the south Alnus Glacier and followed up the ever steepening shale and rock to the summit. There was no difficulty and on the last thousand feet the rope was discarded. (Summit, 5.45.)

Not far away and only 600 ft. above us were the shale-tops of Mt. Scott, with a lengthy talus slope of moderate angle running down to the snow plateau. We had been told that the mountain would afford good rock-work, but from this side it looks monotonously easy. Our own peak was immensely preferable. The only enjoyable way to climb Mt. Scott will be by its western wall.

Below us, on the N., there was a profound drop to the north Alnus Glacier, while down Alnus Creek the waters of Fortress Lake were completely in view. Alberta, The Twins, and Columbia limit the S.E. horizon, and one might trace the Divide around the head of the Chaba icefields, across Fortress Pass, up to the acute angle at Divergence Peak ; back again to the conquered peak where some of us—not all—are hard at work cairn-building ; thence southward and around the Hooker basin and the subsiding ridges, shimmering in the evening sun-glint, that carry it to Athabaska Pass. And beyond Mt.

Ermatinger—we were always looking back—the majestic northern rock-walls of Mt. Serenity, its lower slopes in the long shadows that fill the valley of Fortress Lake and the head of Wood River.

The return was a race with daylight. It took us only an hour (6.15–7.15) to return to the top of the séracs, and two hours more (9.15) to get down the intricate labyrinth. We were soon off the upper ice (9.30), and, thanking all natural forces for the long twilight of northland July, made camp (10.30) just as the darkness became tantalising. We are convinced that, in many instances, approaching darkness is tantalising in inverse ratio to the distance from the frying-pan! On the upper snows it doesn't matter so much; it is the last uncertain scrambling in the moraine and the glacial brook that brings out profanity.

July 4 was a day of rest in camp, the National Holiday being celebrated with spasmodic efforts at bathing and laundry, and in futile attempts to construct steam-bombs out of jam tins. Conrad was the object of much photographic activity: the entire pack-train followed him into the pond—we had been out from Jasper for more than a week, and there were lots of salt on his hide!

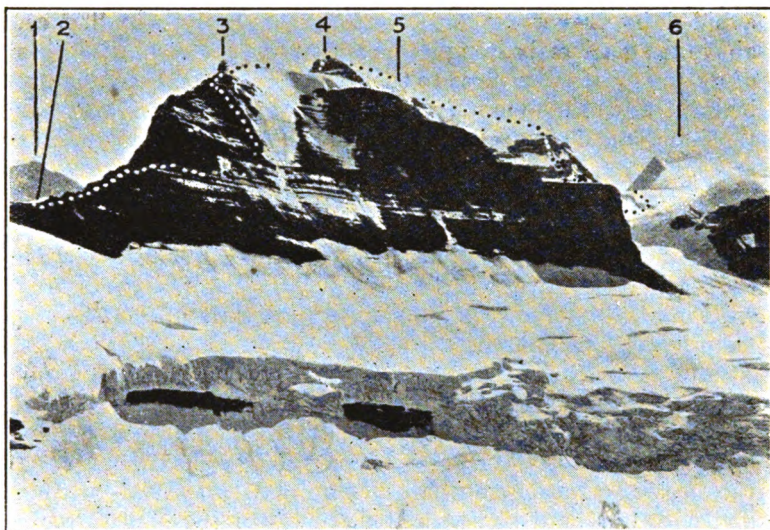
Mt. Hooker. 10,782 ft. First Ascent.—We began, on July 5, an ascent which eventually took more time than we had expected. In fact, it turned out to be an endurance record for a Canadian climb—a record that we have since been told we are quite welcome to. We started for Mt. Hooker (4.45), taking forty-five minutes to the ice and an equal time to the rocks at the foot of the W. wall of the glacier. In selecting the wall, below Mt. Evans, it had been hoped to establish a quicker approach to the upper snows than had been found in the ice route to Mt. Oates. Further, the rocks offered a more direct route to the mountain. It proved not to be so short.

Two 20-ft. chimneys were followed by ascending ledges and slabs, and consumed an hour. We traversed southward and upward across a slanting watercourse and crossed below a large waterfall in the centre of the wall. By re-entering this gully it seemed possible to ascend directly by broken ledges; we had barely started when a whizzing and Conrad's cry of 'Stonefalls!' made us take what cover was available. It was the beginning of a raking fire in which we were all struck, but luckily without serious damage. Conrad, calmly saying 'Gentlemen, we must



WHIRLPOOL

move a little to one side,' relieved the tension ; we quickly got out of range, in time to avoid a heavy bombardment of larger boulders that came down over our intended path and would surely have done for us had we persisted. We realised afterwards that in Conrad's cool leadership in emergency we had seen one of the finest things produced by the mountaineering art. So, selecting a new way, we went on ; the ground became increasingly difficult ; in one narrow chimney of 35 ft. the axes



MT. HOOKER FROM THE S.W.

- | | | | |
|---------------|------------------|----------------|-------------------|
| 1. Mt. Evans. | 2. West Col. | 3. West Tower. | 4. Highest Rocks. |
| 5. Summit. | 6. Mt. Serenity. | x x Bivouacs. | |

and sacks had to be roped up, and the last man, looking up at a wrong moment, got the returning coils full in the face, and rather to the detriment of a treasured incisor. Above the chimney was a short bulge of exposed cliff, and the two formed a little section on which an hour was spent. Easier ledges brought us up to the glacier (11), and we saw that the ice route would after all have been preferable.

We halted twenty minutes for second breakfast. Mt. Hooker was now in front of us, across an extent of threatening séracs, with northern cliffs surmounted by a twisted, corniced arête that makes direct ascent impracticable. The eastern end of the mountain swoops down in a fearful ice-bulge that seems

to overhang, and, even from Mt. Oates, we had not seen a plausible way up. And so we chose the western col, knowing it might give us a long fight; we had seen this side from the Kane Icefield and had found nothing better.

Crossing, not without some windings through the crevasses, we reached a poorly bridged schrund, and thence cut forty-five ice steps to the col—9300 ft. (1.45–2.30); this time spent in crossing schrund and cutting into the col. The sharp buttress and tower rising from the col to the W. arête was avoided by traversing and ascending ledges on the S. face, above the glaciers draining to Wood River. Steepening pitches of no great difficulty, close to the margin of a broad snow-gully, brought us to the mountain's crest below the rocky tower near the junction of the middle and western thirds of the summit arête.

~ The top of the tower is shaly, but we avoided it entirely and maintained our altitude by crossing a broad snow-shoulder extending southward. Here was a really bad schrund, with flat, thin bridges, and a cornice-lip; all of which we treated with marked respect and crossed cautiously on all-fours. We adapted the slow motions of the breast-stroke to this particular situation, in a way that would have delighted a swimming-instructor.

We now gained height on the main arête, for the first time able to gaze over the northern wall. We pushed on rapidly, the heavy, compact snow-crust requiring superficial cutting, and pulled through some small chimneys to the highest rocks (7.30). From below, we had thought that these last rock-towers might be the highest point, but, arriving, it was plain that the snow-crest beyond culminated in two wave-like points, with the eastern the higher. After making a tiny cairn and leaving a record, we followed along the cornice base to the steep snow of the highest point (8). More than fifteen hours had elapsed since we left camp; had David Douglas been with us he might have thought his estimate of height was not so far wrong! We anchored, and each, separately, had a look over the cornice down the N. wall to the icefield. Smoke had just begun to come in from a distant forest fire in the direction of Canoe River; we gazed back along the line of dripping, curling cornices into a red sun—it was as if one were living in the atmosphere of a Pitschner lithograph of Mont Blanc, so gaudy it was. Our more rational interest, during the few minutes on the actual summit, lay in the fact that we appeared to overtop Mt. Scott by several hundred

feet. We later confirmed this from Mt. Fraser, in the Rampart Group, and have become convinced that Mt. Hooker is the loftiest peak of the group. We would not, however, be understood as placing our eyesight in competition with the work of the Interprovincial Survey; so for the present Mt. Scott must rule supreme.⁴⁴

It was becoming late, and there was quite evidently insufficient time for us to get off the mountain and return by the way we had come. We had no desire to return down the rock-wall in the dark, nor, for that matter, at any time. So we started down a long snow-shoulder, direct from the peak and descending westward of the snow-flats which form an irregular pass between Mts. Hooker and Serenity. As we walked down, close to the edge, about sixty feet of cornice sank silently, its impact far below producing echoing crashes. We came to the southern extremity of the shoulder without seeing any way down until the terminal buttress was reached. Following down the margin of a broad couloir for a little way without trouble, another 600 ft. of ledges would have taken us to the glacier. We stopped for a moment to look at the sunset: the base of the Wood River massif half-hidden in violet mist; the sky tinged with the faint green of arctic twilight, with a tracery of smoke-wisps, grey and red; Clemenceau's pyramid lifted into the heavens, with no apparent foundation, a floating thing, serene, above Bras Croche, with the pearl-pink colouring one associates with Oriental mosques.

Perhaps we were hypnotised: the weather was fine, the view entrancing; we had come down to the respectable level of 9600 ft., and it was too late to get home. We planned a night on the rocks. What more natural than, when we saw a perfectly fine cave close at hand, we should make for it? It was roomy and dry, with doorway rather larger than one would have selected for a permanent habitation, but altogether

⁴⁴ A similar and independent conclusion was arrived at by the first party to ascend Mt. Serenity. In a recent letter Mr. Carpe says: '... both Palmer and myself were very much surprised when the survey map came out showing Scott to be higher than Hooker. It definitely did not make that impression from Serenity. I should say that it (Mt. Scott) seemed lower than Serenity. On subsequent examination of photographs taken from the Fraser Group the previous year, however, Scott appears to hide Serenity. Owing to the late hour at which we reached the top of Serenity, I did not take instrumental levels on anything. I have no reason to question the Boundary Commission's figures.'

not to be sniffed at. There was a trickle of water only a few feet away, and we consumed most of our remaining provisions and thought little of it.

We spread our things about, crawled near to each other, and for a while slept quite comfortably. And then the trouble began. About midnight there was a rumbling of thunder with flashes of lightning. Rain fell, soon turning to snow. A wind came up, gusty and carrying snow into the cave. We were fairly well protected and kept dry. We got up at 4 A.M., with the first signs of daylight, peering out to find a dense fog which obscured objects more than perhaps fifty feet away. There was a light covering of snow on the ground, and the sleet continued.

Roping, we started downward, thinking to reach the glacier, round eastward to the pass, and get over to the Scott icefall. We got down to the glacier margin without much difficulty, although care was required where the rocks had become icy. The fog was most deceptive, and we had difficulty in distinguishing height and pitch of quite simple bits of cliff. And here we stopped. We had map and compass and knew our direction; but the Wood River slope of the Hooker Icefield is so fearfully put together with different levels of sérac and twisted, insinuated buttress, that we simply could not tell, in the fog, just where the Hooker-Serenity pass might lie. There were several chances of going astray and wandering over farther on the Wood River side; which, away from our base of supplies, might be disastrous. We stamped around in the snow for two hours and attempted to reach the pass by keeping close to the southern buttress of Mt. Hooker. The fog did not break, and the snow kept coming down. So at 10.30 A.M., finding a protected corner, walled in on three sides and roofed over by a gigantic slab, we decided to wait out the storm rather than waste energy in fruitless effort. The wet snow had soaked us; our food was gone except for some bits of chocolate and cheese; we had but a little extra clothing, and no means of making fire. We were at 9800 ft., and the snow kept on.⁴⁵ We arranged things as well as possible,

⁴⁵ To recapitulate: our reason for the first bivouac was to avoid working through the Scott icefall at a late hour, with the possibility of being halted for the night in an exposed position. We did not retrace our route over the long west arête of Mt. Hooker because we wished to complete the traverse and get off the mountain by a way easier than that of the ascent.

The second bivouac was purely a question of finding shelter in bad weather. We did more on the second day than a descent of

flooring the cavern with slabs, blocking the open side with boulders and filling the chinks with snow. Fog hid everything but near objects. We were wet and cold, beginning to get hungry; all suffered more or less with intermittent cramps in the thigh and abdominal muscles. There was a good deal of shivering, that was hard to conceal, done that night; and quite a bit of gastric burning, not so evident, but none the less painful—luckily we could get water in the cave. There was no way of keeping out the fine blown snow.

Morning came, a cheerless dawn; but we had been watching for it. The snow seemed to be lessening; the fog ebbed and billowed. Just before 4 A.M. the snow ceased; the fog wavered and lifted, so that as we looked out we could see the ground below us and the way toward the pass. We were a stiff lot, but Conrad made a leap for his boots that startled us. It was desperate work getting those boots on, but Conrad was first out, pushing over the snow-crusted boulders in the doorway in his hurry. Uncomfortable as we were, it was impossible not to think of Samson and the pillars of the temple!

Conrad went ahead to break trail; the ground was not difficult, once the way was seen, and the rest of us roped and followed. For a few minutes, as we zigzagged down to the glacier, we could see the lower slopes of Mt. Bras Croche, across Wood River, and Chisel Peak on Fortress Lake. It was only a few hundred feet to the ice below, and we followed Conrad's track; the fog closed down gradually. We found Conrad returning with the good news that he had found the pass and had been nearly to it. He roped with us and we proceeded as fast as possible. It began to snow and blow harder than ever; but we were sure of ourselves. Our faces and clothing became coated with ice, and hands were cramped through holding a frozen rope. For an instant we saw a dark stretch of open water in the lakelet on the pass summit, and everything was hidden again. The wind blew with great violence, making balance on level ground difficult; our tracks were not very straight, but the slope began to be downward, and we knew we had come across into territory that was familiar. Through rifts in the mist we recognised the cliffs of Ermatinger and the eastern ice-bulge of Hooker, and came at last out of the storm to the main icefall. The séracs were all snow-

300 ft. would indicate, trying several lateral routes toward the Hooker-Serenity pass. In fact we finally ascended a little in reaching the bivouac.

covered ; but we would have tackled worse things to get off the mountain. Conrad's never-failing craft brought us down in good order to the unroping place, and we followed the route used for Mt. Oates, down the eastern moraine and the glacier tongue. Camp was reached shortly after 11 o'clock. We had been out a little more than fifty-four hours.

Things had been happening at camp. High on the ice, above the place where we unroped on descending, we noticed tracks of a man. Dave had become worried when we did not appear on the second day, and had gone up in an unsuccessful effort to find us. When we arrived at camp we found that he had left at 2.30 A.M. to ride to Jasper for help. Jack was in camp, mighty glad to see us, and immediately got us a meal—several perhaps, all in a row—which we devoured before turning in. Jack was sent off with instructions to ride as fast as possible and turn back the search-party. We learned later that Dave had ridden the 45 miles from Scott Glacier to Jasper in nine hours, had secured new horses, and, with Phillips, had sent out a really remarkable party, including Mr. V. A. Fynn, A.C., with the guides Alfred Streich and Hans Kohler. If one were in real danger, it would be impossible to conceive of a more efficient life-saving unit ; and the unselfish sportsmanship of Mr. Fynn, who unhesitatingly threw over his own plans on hearing of our supposed difficulties, compels our admiration and remains a cherished memory.

By fast riding, Jack had turned back the search-party at the Whirlpool tie-camp ; and before noon next day he and Dave had come back to us. They needed sleep, and their horses were used up. The climbing party, after a few hours in bed, had recovered sufficiently to do camp work in the absence of Jack and Dave ; and the impression remains that none of us missed a meal. It was July 8.

By the camp-fire that evening Conrad remarked that Mt. Hooker was the most interesting mountain he had climbed in recent years, and that the summit arête reminded him very much of Mt. Cook in New Zealand. There are few Canadian peaks that he finds worthy of such praise.

Mt. Hooker we believe teaches two lessons : first, that it rarely pays to wander over broken glacier or snowfield in fog ; secondly, that a party in good condition can wait out a storm of considerable duration. Of the two things, clothing is more important than food. One night out at the 9000-ft. level is plenty ; the second is bound to be unpleasant. On



MT. SIMON (FRASER GROUP)
from Geikie Camp looking W.

Canadian peaks, however, one is very rarely in a position when timber-line cannot be reached.

To show that our climbing party did not return in a hopeless condition, it may be added that the only damage done was in the shape of superficial frostbite of the hands, acquired on the third day out, as the result of holding with wet mittens a hard-frozen rope. On July 9, with only one day of rest, our time in the area being up, the entire outfit made the 20 miles to the Whirlpool tie-camp, and on the following afternoon were in Jasper.

We were *en route* to the Rampart Group, and had hoped to find a pass through the valley of Simon Creek over to Tonquin Valley. Because of the amount of spring snow this was not possible; but on July 11 we rode from Jasper, by the Miette and Meadow Creek trails, to Tonquin Hill. Camp at the southern end of Amethyst Lakes was reached during the following morning, and Surprise Point was climbed later in the day. On July 13, eight days after the start for Mt. Hooker, we ascended the Fraser Glacier to the Erebus-Fraser col, crossed to Simon Glacier, the head of the 'North Whirlpool,' made the first ascent of Simon Peak, 10,899 ft., the high unclimbed summit of Mt. Fraser and the loftiest of the Rampart Group, and then traversed McDonell Peak, 10,776 ft., back to camp. This is no programme for an exhausted climbing party! Within another week we were climbing in the Robson Group.

The ascent of Mt. Hooker was the fulfilment of a great desire. To see and to climb Mt. Brown and Mt. Hooker will perhaps not be thought of as a remarkable alpine ambition. They are probably not the peaks Douglas named; in fact, we remain in doubt as to precisely what he did, where he went, and what he named during his few hours at Athabaska Pass. The Interprovincial Survey has unquestionably done the best thing possible in perpetuating these classic names by applying them to a lovely peak on either side of the pass. The ambition to stand upon them is a deeper thing than it appears; for the naming of peaks by Douglas, and the over-estimation of altitude—no matter how strange or ludicrous it may seem; no matter who was at fault in figuring—these things first led men in search of great Canadian heights. They came from far corners of the earth, following pioneer trails, seeking beauty. And none there was who returned insensitive to the glory of that mountain vastness.

And so we turned back from Athabaska Pass, on the Whirlpool trail toward the site of Jasper House, feeling that we too

had come under the spell of this overland route of the long-ago, and, on Mt. Hooker at least, had shared a little in its adventure.

The present map is a reduction of Sheets 26 and 27 (scale 1 in. = 1 m.) of the Interprovincial Boundary Survey. They can be obtained on application to the Surveyor-General, Ottawa.

FIRST ASCENTS OF MT. BARBICAN, 10,100 FT., AND OF
MT. GEIKIE, 10,854 FT. (CANADIAN ROCKY MOUNTAINS).

By VAL. A. FYNN.

ON July 9 I met C. G. Wates and M. D. Geddes, both members of the C.A.C., and F. H. Slark at Jasper (Alberta), and we proceeded on the morning train to Geikie Station, some eight miles W. of Jasper, where we joined our pack train of nine horses in charge of W. Digby Harris of Jasper. Leaving the station at about noon, we made the new Ranger's cabin¹ in Tonquin Valley *via* the Meadow Creek trail in about seven hours. The next day took us over the divide into British Columbia and over a pass W. of Barbican to the Geikie Creek on the S. side of the Ramparts. There is no trail over this pass, and considerable time was lost and unnecessary effort expended, as we went too far W. of the divide and crossed the ridge considerably W. of its lowest depression. The camp site² was reached in twelve hours at about 11 P.M., with all members of the party dead tired. All slept in the open.

¹ This is located on a shoulder overlooking Maccarib Creek, slightly W. of the stream which descends from the direction of Rg.² and about $\frac{1}{4}$ " E. of apex of A in the word ALBERTA. It is marked 1 on map.

² Our Geikie camp was located at about 7150 ft. and just about where that contour line, if shown, would cross the R of BRITISH on map. It is marked 2 on map.

The couloir up which we went is shown on the map N. of the two R's in the word TURRET. The Black Inkwell is shown on map just E. of the N in TURRET MTN. The Blue Inkwell is under the E of TURRET.



PART OF FRASER GROUP
from Geikie Camp looking S. E.



DUNGEON AND REDOUBT
taken from New Ranger's Camp on N. side of Ramparts looking, almost S.



Photo : F. H. Slark

W. END OF THE RAMPARTS
from N. Bastion, Turret, Geikie, Barbican

The Ramparts consist of a series of peaks running about E. and W. Beginning at the W. end, the summits are: Barbican, Geikie, Turret, Bastion, Redoubt, and Dungeon. None of these had been climbed at the time we reached Geikie Creek. I had no opportunity to study closely the last two, but of the first four Turret is clearly the most difficult, with Geikie second, Bastion third, and Barbican fourth.

July 11 was devoted to setting up tents, arranging supplies, and reconnoitring Mt. Geikie. On July 12 a training and 'get together' trip was undertaken up Mt. Barbican. Crossing the shale slopes of the S. face from E. to W. and close under more or less high cliffs, a well-marked col on the S.W. arête was reached in 5 hours, a further $3\frac{1}{2}$ hours sufficing to land the party on the summit. The S.W. arête was followed without difficulty to an 8-ft. gap, the crossing of which required the use of the rope. Soon after the summit buttress was reached, and, as the S.W. arête now became very steep and smooth, the S. face was traversed E. in an ascending line to a point which gave easy access to the summit. The rope was not used after the gap above referred to, although the party included Mr. Slark, who had never before attempted a climb. The rope was, however, put on for the descent, and, following a somewhat different route, down a couloir on the S. face of the mountain close to the S.W. ridge, camp was regained in 5 hours 45 minutes.

July 12 was again a day of rest, partly devoted to the study of Mt. Geikie. A well-marked but very broken ridge descends from its summit to Geikie Creek, dividing this side of the mountain into two parts, one of which faces S.W. and the other S.S.E. The S. ridge offers little hope of success; the S.W. face presents the firmer rock but is very steep, and is likely to offer considerable difficulties to the climber; the S.S.E. face is cut by a deep and not excessively steep snow-couloir³ which gives easy but not always safe access to the E. ridge. It also gives access to that part of the S.S.E. face which lies somewhat E. of the summit and which is, no doubt, much easier than the S.W. face.

Mr. Wates was the only one of our party who had ever been in the district, and he had made at least three prior attempts to reach the summit of Geikie. His earlier parties had first tried the snow-couloir in the S.S.E. face and the E. ridge, but had given up this route and devoted their more recent efforts

³ See marked route at end of this article.

to the S.W. face.⁴ My companions insisted very kindly on leaving the choice of the route in my hands, and after a careful survey of the peak, and with an eye to the strength of our party, I decided that the aforesaid couloir and the E. arête offered the easiest and most promising route. It is true that one of the steps on this ridge appeared impossible, but a ledge on the S. face promised a means of circumventing the difficulty. This step is some 600 ft. below the summit, and is easily seen from a small lake, the Blue Inkwell, on the E. side of the S. arête.

Leaving camp at 2.50 A.M., Wates, Geddes, and I traversed to the Blue Inkwell, reaching it at 4.25 and the foot of the snow-couloir at 5.5. Following the snow as long as possible, and at last taking to the very rotten rocks on the W., the E. ridge was reached at 10.15. The rope was put on at 7.40, and retained for the rest of the climb. From the top of this couloir the E. ridge rises in an unclimbable step, but a steep rib descends from the summit of this step in a northerly direction and makes it possible to circumvent the difficulty. This rib is but short, and soon drops almost perpendicularly into Tonquin Valley. Anxious to profit by his previous experience, we questioned Mr. Wates as to the line followed by his earlier party, but he could not recollect the course taken, and this part of the problem had to be solved afresh. An attempt to circle the N. rib was at once frustrated, which called for a closer study of the obstacle. The foot of any part of the E. face of this rib is easily accessible from the top of the couloir over horizontal ledges covered with debris. Near the northern end of the rib is a clearly visible sky-line cleft from which descends a steep and difficult chimney. The ascent was continued by an easy chimney immediately to the N. of the obviously difficult one and by a convenient tunnel-like cleft running S. through the rib itself and parallel to it. A number of large stones wedged between the walls of this tunnel facilitate the ascent, and the tunnel lands the climber into the sky-line cleft already referred to. It is now necessary to traverse along the extremely steep W. face of the N. rib to a steep snow-filled chimney which leads to the summit of the rib. The rib is then followed until it rises very steeply and merges into the N. face of the E. ridge. At this point a traverse along the N. face of the E. ridge becomes necessary in order to reach a point from which the crest of this arête can be attained over steep snow-slopes. This traverse includes

⁴ See *C.A.J.* xiii. 53 seq.



W. RIDGE AND S. W. RIDGE OF GEIKIE
from Geikie Camp.

the climbing of a steep and very narrow crack, best accomplished by wedging stones into it at convenient intervals. Following the crest of the E. ridge without difficulty, one soon comes in sight of the obviously difficult buttress previously referred to, and characterised by black and wet rocks. Leaving the crest, we took to easy ledges on the S. side, and thus readily turned the black rocks. The ledge which leads around the wet black buttress itself is characterised by a very large rock of a bright red-yellow colour which partly obstructs this ledge and has evidently broken away from the wall just above it. Climbing in a diagonally ascending direction along the here easy S. side of the E. ridge, a secondary summit is soon reached without trouble. This is separated from the main summit by a wide depression which does not present any difficulty, and the main summit was ours at 3.45 P.M. Leaving at 4.15, the route described was retraced, the top of the couloir being reached at 7.10 P.M. After a struggle with the rotten rocks in the upper part of this couloir, the party took to the snow before dark and continued down very slowly, reaching the foot of the couloir and taking off the rope at 1.10 A.M. on July 15. A weary trudge to camp in semi-darkness brought the ascent to a close at 4.50 A.M.

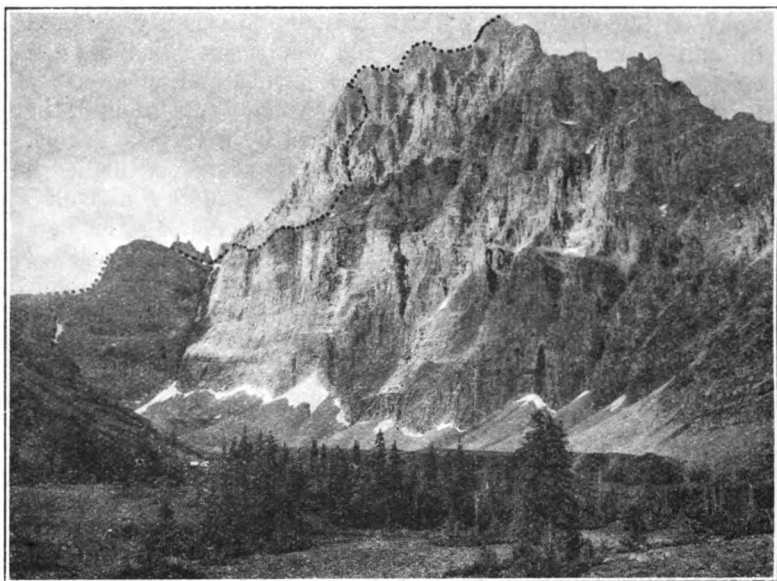
The route followed is perhaps somewhat complicated and will not always be found safe, but does not present any serious difficulties. It must be conceded that there are plenty of more difficult mountains in Canada. Among them is Mt. Louis, near Banff. Mt. Geikie cannot be compared to Mt. Louis in point of difficulty. In the case of Geikie it was only necessary to determine the best route and follow it aggressively and efficiently. This our party successfully accomplished at the first attempt.

But the route we followed is not the only possible one. There are at least two other possibilities.

(1) A possible route is by way of the col between Barbican and Geikie and the W. arête. There are four distinct buttresses on this arête, including the summit buttress. The lower three-quarters of the second one must be turned by means of a traverse into the S.W. face. This traverse will form the more difficult part of this line of access. This line of attack is the safest but also the most difficult of the three routes here outlined. It should not present excessive difficulties to a party composed of good amateurs accustomed to work together, or to a strong party led by a competent mountaineer. The route suggested is indicated on the text block.

346 *First Ascents of Mt. Barbican, 10,100 ft., and of*

Closer examination may show that at least part of the lower three-quarters of the second buttress may be better overcome



W. RIDGE AND S.W. FACE OF GEIKIE FROM GEIKIE CAMP (S. OF COL BETWEEN GEIKIE AND BARBICAN).

..... *Suggested Route (1).*

by utilising a steep snow-filled couloir on the N. side of this part of the W. arête and the broken rocks S. of the said couloir.

(2) The couloir by means of which the E. arête was reached turns slightly E. after running about half its course. At this point it is possible to leave it and reach the upper and easy reaches of the S.S.E. face of the peak by climbing the rocks on the W. side of the couloir to the highest visible ledge leading into this face. This ledge must be followed around a corner and in a westerly direction.⁵

⁵ [The route actually followed lies all the way up the bent couloir right up to the X on the main E. summit arête. This couloir, from the end of the snow at its apparent head, continues, *though out of sight*, right to the main arête. The dotted route bearing away to the left from the end of the snow in the couloir and attaining the main arête more to the left indicates Mr. Fynn's suggested route No. 2. He adds: 'I have also shown part of the route actually followed [on the E. arête]. The key is the traverse just left of the arrow—from the dot on ; the actual route follows the E. or summit ridge.'—Editors.]

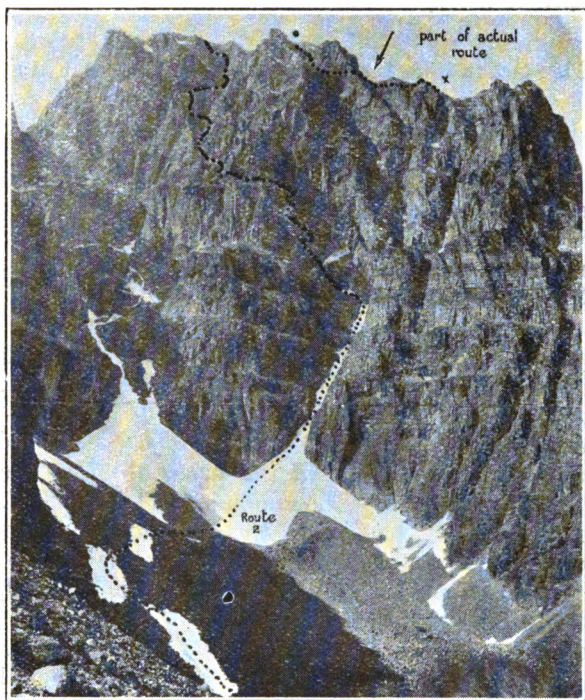


S. S. E. FACE OF GEIKIE

Turret is without doubt the most difficult peak in this range, and I could see but one promising approach, *i.e.* from the S.W.

Bastion can be reached from the N. or the S. without any particular difficulty.

The party rested on July 15. The next day we went back to the Tonquin Valley cabin, following a much better line and



S.S.E. FACE OF GEIKIE.

.... Route of Ascent by Fynn's party.

— · — Suggested alternative Route (2).

covering the distance in half the time. Jasper was reached on the 16th *via* the Meadow Creek trail.

All three climbers were quite out of training, which accounts for the slowness of our progress. There is no reason why nine hours should not be amply sufficient to take a party of three from our camp to the summit of Geikie, and six to seven hours should be more than enough for the return journey.

This article has been lavishly illustrated, as the rock formation is among the finest in the Rockies and several of the

peaks are still unclimbed. The paper can be readily followed with the map.

The 1 in. scale map, No. 28, of the Interprovincial Survey, of which the present map is a reduction, can be obtained on application to the Surveyor-General, Ottawa.—EDITORS.

THE AMERICAN MEMBERS OF THE ALPINE CLUB.

Précis of Minutes of Meeting held April 19, 1924.

THE seventh Dinner and Meeting of the Association was held on Saturday evening, April 19, 1924, at the Union Club, New York City.

The members attending were : Freeman Allen, Allston Burr, Allen Carpe, Charles E. Fay, J. Ellis Fisher, J. W. A. Hickson, LeRoy Jeffers, A. H. McCarthy, Howard Palmer, H. B. de Villiers-Schwab, William Williams, and Joseph Wood, jun. The guests were : John C. Case, J. H. Coontz, E. C. Maule, and Harry P. Nichols.

Following the Dinner, the Meeting was called to order by the Chairman, Prof. Fay. All the present officers were re-elected for another term. The announcement that Prof. A. P. Coleman, Hon. A. C., had joined the Association was received with pleasure. This accession, together with that of the newly elected Messrs. Henry S. Hall, jun., and Joseph Wood, jun., brings the membership to thirty.

There was first presented a moving picture film of 'An Ascent of the Grand Arête of the Salève' (Geneva), taken by M. Lozeran.

Dr. Freeman Allen next read a paper of reminiscences of various climbs in the Alps—mainly in the Oberland, Zermatt, and Chamonix districts—made with Mr. Allston Burr and other Bostonians, in the years 1908 to 1911.

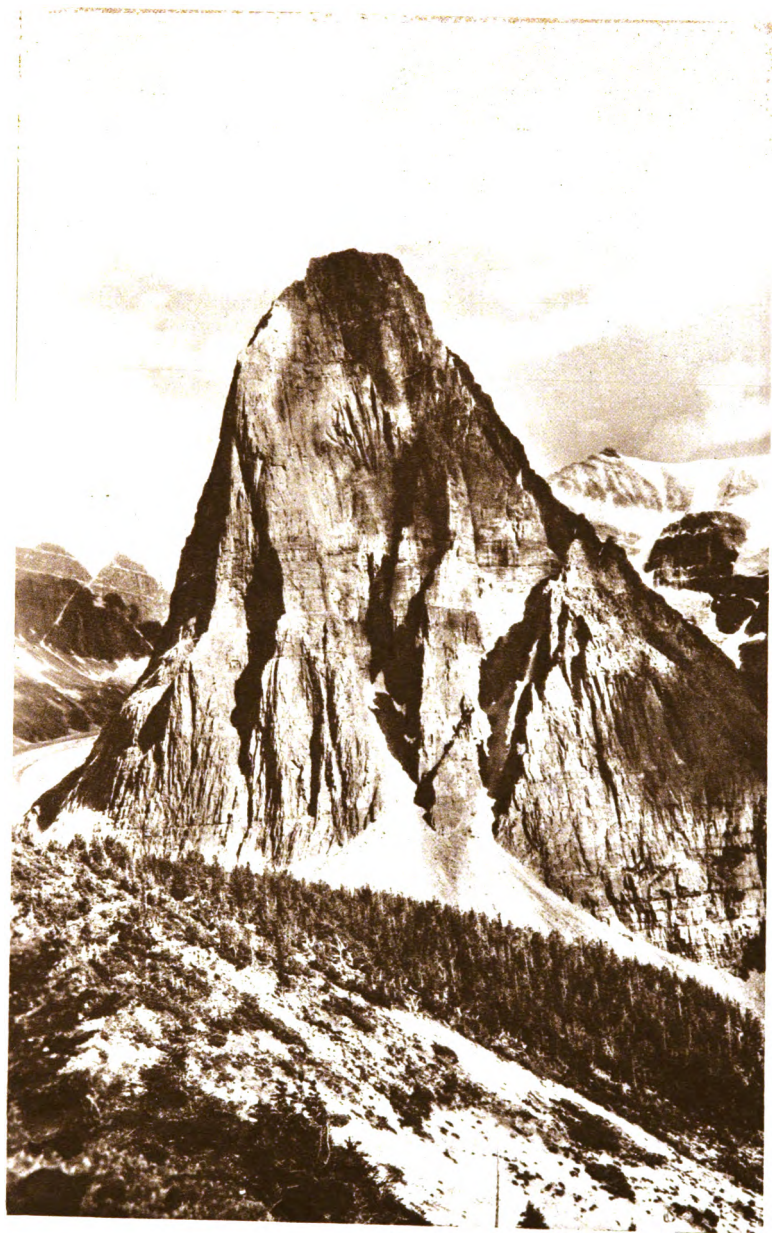
Finally, Mr. A. H. McCarthy gave a comprehensive account of the climbing that has been done on Mt. Robson, including the story of its conquest in 1912 by Col. W. W. Foster and himself with the guide Konrad Kain.

H. B. DE VILLIERS-SCHWAB,
Hon. Sec.

11, Broadway, New York City.



TURRET
from S.W.



POSTERN
from W. Geikie Glacier on left.

THE PYRENEES.

BY JAMES A. PARKER.

(Read before the Alpine Club, May 6, 1924.)

WHILE it is true that a small number of papers descriptive of the Pyrenees have appeared in the ALPINE JOURNAL, it is, I think, a regrettable fact that so far only two papers have been read and discussed at meetings of the Club. The first paper to be read was that by Count Henry Russell, 'On Mountains and on Mountaineering in General,' in 1871; which was followed after an interval of twenty-eight years by Mr. Spender's 'The High Pyrenees' in 1899. And now, after what appears to be the recognised interval of about a quarter of a century, it is my privilege to read the third. My selection for this duty is not due to my having an exhaustive knowledge of the Pyrenees or to my having done any wonderful feats on them, but simply to the fact that I have spent the past three seasons among them.

Apparently very few members of this Club visit the Pyrenees, and I therefore feel that my best course this evening will be to give you a very brief description of the mountains, and with the aid of my photographs show you what they are actually like, and finally give you some up-to-date information regarding huts and other facilities for mountaineers.

The Pyrenees, in their total length of about two hundred and fifty miles from near San Sebastian to Cap Cerbère, are as yet crossed by no railways,¹ and even by few roads. In fact, between the Col de Pourtalet and the Col de Puymorens,

¹ This statement is perhaps not strictly correct; but what I mean is that as yet there is no railway across the Pyrenees which is open for traffic. As a matter of fact, two trans-Pyrenean railways are in course of construction and will probably be opened for traffic in two years' time. These are a railway from Oloron to Jaca through a tunnel under the Somport, and a railway from Ax-les-Thermes to Puigcerda through a tunnel under the Col de Puymorens. A third railway is under consideration, namely, from St. Giron to Lerida by a tunnel under the Port de Salau; but little appears to have been done to its construction.

a distance of 110 miles, the High Pyrenees are crossed by no roads at all, the only highways being mule paths and foot tracks.

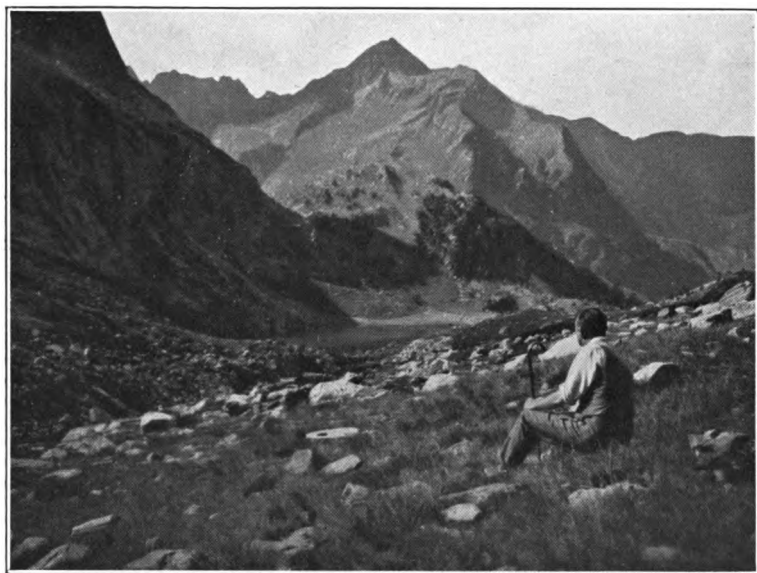
The N. and S. slopes of the mountain chain differ greatly in character and in development. The French slope is comparatively steep, there being only a width of about twenty miles from the plains to the crest of the mountains, and most of the valleys run at right angles to the main ridge. As a result the lateral railway and roads are fairly close up to the mountains, and good railways and roads lead far up into most of the transverse valleys. The French side of the Pyrenees is consequently easy of access, and is well developed. In past years this development consisted mostly in making health resorts and spas, like Cauterets and Luchon; but now the French are opening up their district for climbers and winter sports people by building convenient high hotels and chalets.

On the Spanish side we find a totally different state of matters. The slope of the mountains is flatter and the valley system much more complicated, many of the valleys running parallel to the main range. The lateral railway, that from Saragossa to Lerida and Barcelona, is 60 miles out, and there are only two transverse railways. And there is no lateral road similar to the *Route des Pyrénées* on the French side. The S. slope of the mountains is therefore highly undeveloped, and for climbing purposes is, with a few exceptions, in practically as primitive a condition as it was sixty years ago. And therein lies its greatest charm. To reach it from England the only practical way is to cross the mountains by a high pass, and once across one feels, and is, very far away from civilisation.

To the climber the most interesting part of the range is that between the Pic du Midi d'Ossau in the W. and the almost unknown peaks S. of the Val d'Aran in the E., a stretch of about seventy-five miles—the feature of this part of the ridge being its uniformly high altitude, as between the Port Vieux de Sallent and the Port de la Bonaigue, a distance of 70 miles, it falls below the 7500-ft. level at only one point, namely, the Port de Gavarnie (7487 ft.). The peaks usually run from 10,000 to 11,000 ft. in height, the two highest being the Posets (11,047 ft.) and the Pic d'Aneto (11,168 ft.), both of which, however, are not on the main ridge but stand S. of it. There are, of course, no big peaks comparable with those in the Alps, the glaciers are small, and the climbing is, as a

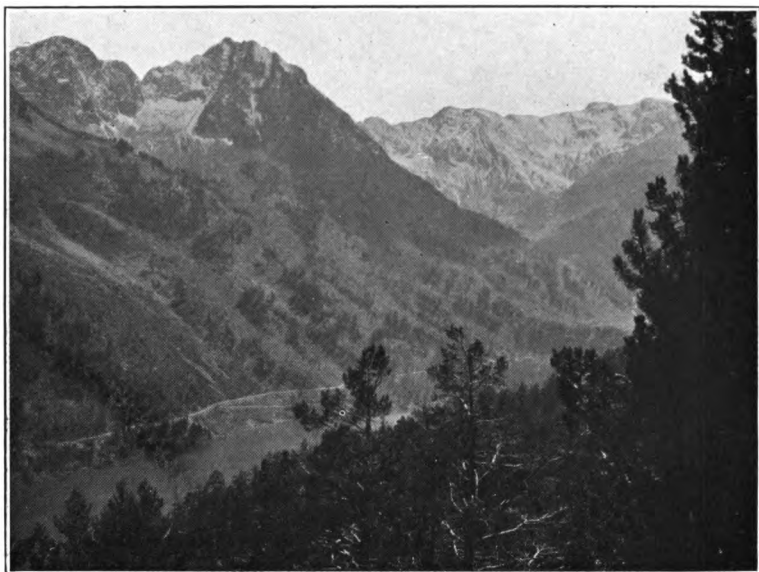


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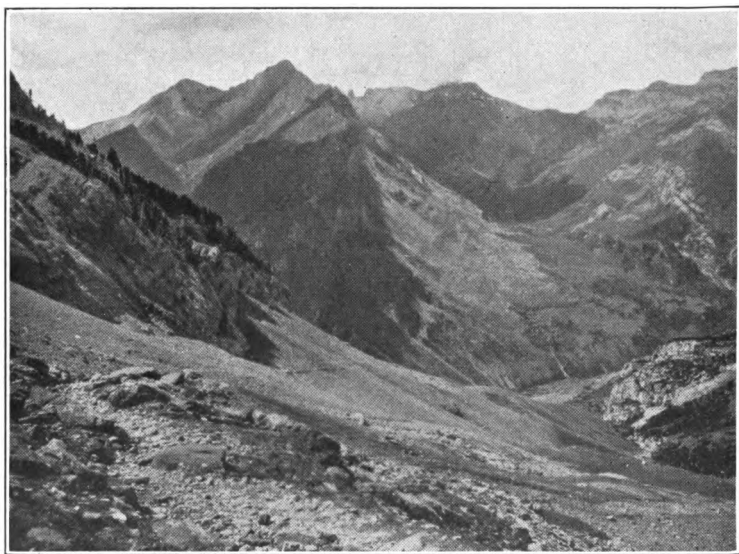


No. 2.

Photos: J. A. Parker.]
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No. 3.



No. 4.

Photos: J. A. Parker.]
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rule, easy. One great drawback to the Pyrenees in the past, to non-camping parties at least, was that the towns, and consequently the hotels, were far too low for climbing purposes; but the French and Spanish climbing clubs are gradually removing this drawback by erecting refuges and chalets at convenient heights. This may spoil some of the districts for camping parties; but if so they have only to cross the frontier into Spain, and there in the high valleys they will find a mountain land which is ideal for their purpose and in this respect is probably unequalled by any of the near mountain ranges in Europe.

My first visit to the Pyrenees was made in September 1921, in which month a friend and I spent about a fortnight in the Luchon district. Our principal expedition was one of five days' duration to Rencluse, from which comfortable chalet we climbed the Pic d'Aneto by the usual route, and on a subsequent day crossed the Maladetta range by the Pic d'Albe to Venasque. These climbs are quite simple and require no description, as the Maladetta range is well known. The chalet at Rencluse, which was opened in 1916, is very conveniently placed for the exploration of the mountains, and is a delightful place in which to spend a few days.

We did not attempt the Posets, which is still a very inaccessible mountain on account of there being no convenient base from which it can be climbed, although it is recorded ² that it has been done *aller et retour* in a long day from Venasque by way of the Eristé Valley.

While at Rencluse we of course visited the celebrated Trou du Toro, regarding which opinions still seem to differ as to where the water goes—whether it percolates underground to the 'Eye of Jove' in the Val d'Aran, or simply reappears farther down the Esera Valley. Probably the question will never be settled until some electric power company 'harnesses' the water at the Trou du Toro and leads it definitely down the Esera Valley towards Venasque in a conduit. In view of such a contingency, it is perhaps fortunate that the Val d'Aran is Spanish territory, as possible international complications will thereby be avoided.

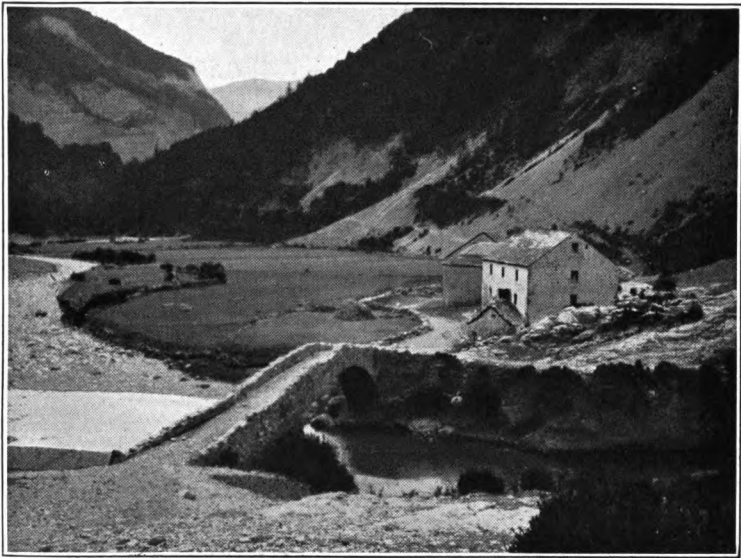
In August 1922 I spent fully a week with a non-climbing friend in the beautiful Vallée d'Aure, a district to which my attention had been drawn by the description of it contained in T. C. Paris's 'Letters from the Pyrenees.' The

² *Bulletin Pyrénéen*, No. 161, pp. 341-6.

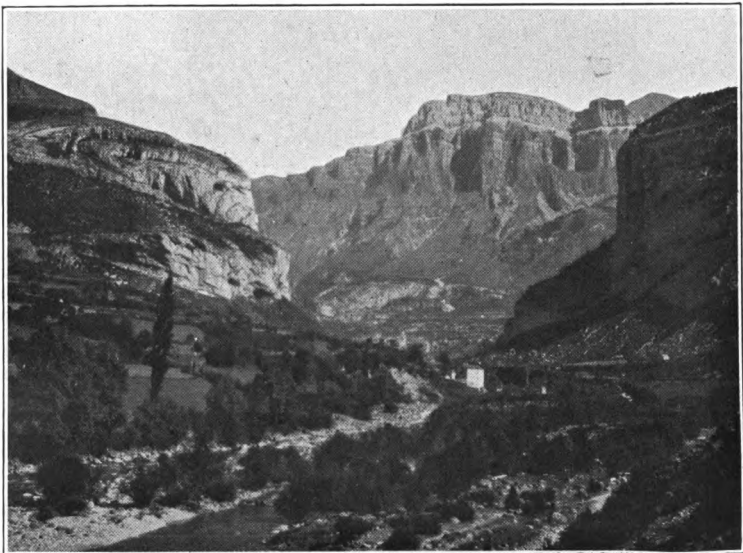
branch railway from Lannemezan stops at the small town of Arreau, from which a good road leads up the valley as far as Fabian, where there is a small and sufficiently comfortable chalet hotel at which we spent several nights. A number of interesting short valleys run southward from the upper Vallée d'Aure to the frontier, of which we explored that of Moudang, which is very beautifully wooded and has a mineral well and a very primitive spa at its head. To the N. of Fabian the valley of Couplan leads up to the Lac d'Orédon, where there is now a very comfortable chalet owned by the C.A.F. and T.C.F., and which is a very convenient centre for the exploration of the many fine peaks in the neighbourhood, of which the Pic Méchant (9659 ft.) is probably the most interesting.

In 1923, with a climbing companion, I again visited the central Pyrenees. Our first expedition was from Gavarnie to Ordesa in the Vallée d'Arazas, by way of the Port de Gavarnie and Bujaruelo, a very delightful walk of about eight hours. The Vallée d'Arazas is one of the most beautiful valleys that I know, and the Spanish Government wisely made it a national park in 1917. The two little hotels at Ordesa are very comfortable, and, being placed at a height of about 4824 ft., are fairly convenient for the ascent of most of the peaks on the frontier. The valley is really a cañon with huge limestone cliffs on both sides. In fact, neglecting the entrance, there appear to be only three ways out of it, viz.: by way of the Cirque of Salarus, N.W. of Ordesa, which is an easy climb; and by the Cirque of Cotatuero, N.E. of Ordesa, and the Saut de Gaulis at the head of the valley, both of which are difficult and have been facilitated by iron spikes driven into the face of the cliff. The last is the most important, and can be easily recognised from below, while from above the way to it is now indicated by conspicuous cairns. Some distance above it is the newly built, or rebuilt, Refuge de Gaulis, which can be reached in about three hours from Ordesa. It is a plain stone building about twelve feet square, and in 1923 contained only a sleeping-bench, an iron stove, a table, and a couple of seats. My friend and I spent a miserable night in it in the vain hope of getting the Perdu next day; but the weather was against us.

From Ordesa we crossed back to Gavarnie *viâ* the Salarus Gorge, the Taillon, the Brèche de Roland, and Cirque de Gavarnie, a very fine expedition which took us 10½ hours. The steep rocks of the Salarus Cirque were passed by way



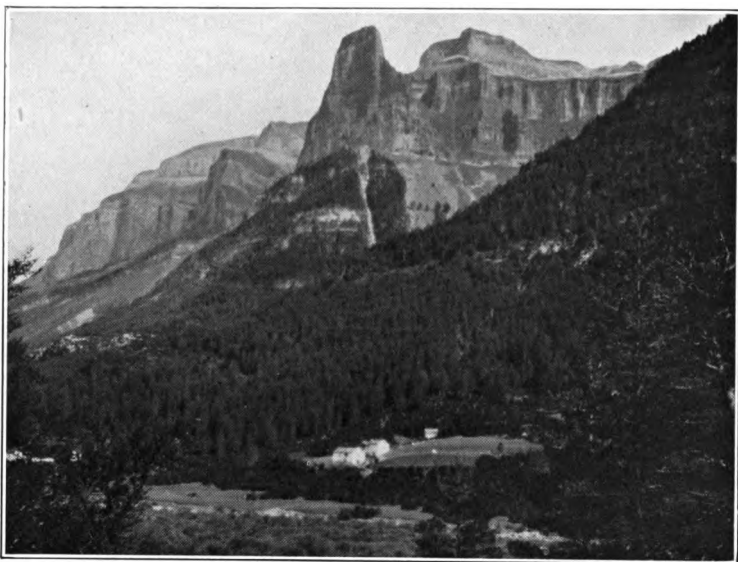
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Photos: J. A. Parker.]

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No. 7.



No. 8.

Photos: J. A. Parker.]
For titles see end of paper.

of a steep buttress at the E. side of the Cirque. The buttress is traversed from W. to E. about half-way up by a narrow ledge called the Corniche de Salarus. Above the cliffs we followed an uninteresting valley until we came to a great flat waste of stones, beyond which we struck up steep rock and snow to the col N. of the Pic Blanc. From the latter we crossed a small glacier to the frontier ridge, which we reached some little distance to the E. of the Taillon. From the Taillon we followed the perfectly easy main ridge to the Brèche de Roland, paying a visit, of course, to the curious hole in the face of the cliff near the latter called the Villa Gaurier. It is a perfectly sheltered cave, and can hold six men. In fact, six unfortunate men were forced by bad weather to spend 106 hours in it in March 1923.³ From the Brèche we descended northwards over easy glacier and snow, at the foot of which we turned to the E., and our guide, young Vergez, took us down a series of stony gorges and grass slopes to the edge of the Cirque. On reaching the edge of the cliffs he turned to the right and took us down the face of the cliffs by the route known as the Échelles des Sarradets, which is pretty sensational but not at all difficult. The route is not marked in any way, and a descending party who did not know it would have a poor chance of finding it.

After a day's rest in Gavarnie we crossed over to Bielsa by way of the Hourquette d'Allans, Cirque d'Estaube, Port de Pinède, and Vallée de Pinède—a very interesting trip but a very long one, and, as we found it, trying on account of the great heat and the scarcity of water. We took 12 hours to it, but this included a long siesta at the Chapel. Bielsa is an interesting little town, but is very far indeed from being clean. We put up at the posada near the bridge, and were well fed and cleanly housed; but the surroundings—well, the less said about them the better!

Our object in going to Bielsa was to climb the Fulsa and the Suelsa, but unfortunately one of the party took ill and we had to content ourselves with crossing over the Port Vieux de Baroude to Fabian, and were thankful to get there. We then went up to the Lac d'Orédon for a couple of nights, and then over the Col d'Aubert to Barèges and Luz, where thoroughly bad weather caused us to retreat from the mountains.

To the climber in the Pyrenees the question of suitable

³ *Bulletin Pyrénéen*, No. 167, pp. 151–6.

accommodation is a vital one. In the days of Charles Packe there was practically none, and that state of matters held until comparatively recently, the climber being faced with the alternative of sleeping out or of doing very long expeditions from the villages. As stated previously, matters are now greatly improved, and in an appendix to this paper will be found brief particulars of the principal refuges, chalets, and hotels that are now available for climbers and are at convenient heights. A perusal of the list will show that in many districts conditions now differ vastly from those existing in the days of Packe and Russell.

In conclusion, I would add a few words about guide-books. For general purposes Baedeker's 'Southern France' is good, but is far too brief. 'Le Guide Bleu : Les Pyrénées' is much fuller and contains a large number of panoramas and an excellent introductory chapter by M. F. Schrader. For mountaineers there is still only one guide-book in English, namely, Charles Packe's, which, though published in 1867, is in many respects still up to date. It is, of course, long out of print, and is very hard to get.

Undoubtedly the best climber's guide to the Pyrenees is that published in 1920 by M. Pierre Soubiron of Toulouse.⁴ It is exceedingly good, and contains thirty-four diagram maps and full information regarding routes and resting-places. No climber visiting the Pyrenees should be without it. For the Val d'Aran an excellent guide-book was published by Señor Juli Soler y Santalo in 1906, which contains a large number of good photographs and a map. Unfortunately the book is written in Catalan, which is not Spanish though something like it. However, with a slight knowledge of the latter language and a good imagination one can extract a good deal of information out of the book.

I cannot say whether what I have told you this evening or the views that I have shown you will tempt any of you to visit the Pyrenees. The district is not one for the arduous climber who wishes to ascend big snow mountains and climb difficult rock peaks. But for the mountaineer who is prepared to rough it and who wishes to wander through a beautiful mountain land, climb peaks which are seldom visited, and sojourn amongst a people who as yet are as unspoiled as their native hills, the Pyrenees, and especially the Spanish Pyrenees, are at present ideal.

⁴ *Les Pyrénées*, by Pierre Soubiron, 43 Rue Roquelaine, Toulouse.

APPENDIX I.

NOTES regarding Refuges and Chalets for mountaineers, and Hotels and Inns at convenient altitudes for climbers, in the Pyrenees. Compiled partly from personal knowledge, but mostly from the recent articles by M. G. Ledormeur in the *Bulletin Pyrénéen*, 'Le Guide Soubiron,' and other sources.

On the French Side.

REFUGE DE LABÉROUAT (4593 ft.). An old bathing establishment converted by the T.C.F. into a hotel-refuge and opened in 1921. Near Lescun, and useful for the Pic d'Anie, etc.

REFUGE D'ARRÉMOULIT (7858 ft.). Built in 1905, destroyed in 1916, and reconstruction under consideration by C.A.F. in 1922. Was convenient for the Balaitous.

CABALIROS (7048 ft.). An inn N.W. of Cauterets for the Cabaliros.

REFUGE WALLON (6126 ft.). Erected by the T.C.F. in 1910, and enlarged in 1922. Near the head of the Marcadau Valley, S.W. of Cauterets.

LAC DE GAUBE (5670 ft.). An inn S. of Cauterets.

REFUGE D'OSSOUE (8701 ft.). S. of Cauterets, near the Hourquette d'Ossoue. Constructed by the C.A.F. in 1900.

LAC D'ESTOM (5935 ft.). An inn S. of Cauterets.

REFUGE RUSSELL (6496 ft.). Constructed by the T.C.F. in 1910. S. of Cauterets, on the E. side of the Vallée de Lutour. Also called Refuge de Culaous.

COL DE RIOU (6404 ft.). An inn on the ridge between Cauterets and Luz. Reconstructed in 1900.

REFUGE DE TUQUEROUYE (8750 ft.). S.E. of Gavarnie, on the Brèche de Tuquerouye. Constructed by the C.A.F. in 1890.

HÔTELLERIE DU PIC DU MIDI (7802 ft.). Built in 1856 on the Col de Sencours.

REFUGE PACKE (8281 ft.). Constructed by the C.A.F. in 1896 on the Col du Rabiet, S. of Luz. Convenient for the Pic Long, etc.

CHALET D'ORÉDON (6201 ft.). Erected by the T.C.F. and C.A.F. in 1919 at the E. end of the Lac d'Orédon.

PLAN D'ARAGNOUET (4351 ft.). Small inn run by the guide Péclose, near the head of the Vallée d'Aure.

FABIAN D'ARAGNOUET (3609 ft.). A small chalet hotel in the upper Vallée d'Aure, near the entrance to the Moudang Gorge.

HOSPICE DE RIOUMAJOU (5118 ft.). At the head of the Vallée de Rioumajou, S. of Arreau.

LAC DE CAILLAOUS (7146 ft.). Maison des Ingénieurs. S. of Arreau, near the head of the Vallée de Louron.

CHALET REFUGE D'ESPINGO (6365 ft.). S. of the Lac d'Oô. Constructed by the C.A.F. in 1923.

REFUGE DE PRATS-LONG (6103 ft.). At the head of the Vallée du Lys. Erected by the C.A.F. in 1897.

SUPERBAGNÈRES (5896 ft.). A large, first-class hotel above Luchon. Opened in 1922.

HOSPICE DE FRANCE (4547 ft.). S. of Luchon, near the Port de Venasque.

REFUGE DU MONTVALIER (7218 ft.). S. by W. from St. Giron. Constructed by the T.C.F. in 1912.

L'HOSPITALET (4711 ft.). Small hotel N. of the Col de Puymorens.

PORTÉ (5325 ft.). Small hotels S. of the Col de Puymorens.

FONT-ROMEU (5906 ft.). A large, first-class hotel, opened in 1913.

CORTALET (7218 ft.). Chalet hotel on the N. side of the Canigou. Built by the C.A.F. in 1898.

On the Spanish Side.

BAINS DE PANTICOSA (5377 ft.). Hotels.

BUJARUELO (4351 ft.). Small posada.

ORDESA (4324 ft.). Two little chalet hotels in the Vallée d'Arazas.

REFUGE DE GAULIS (about 7776 ft.). Above the head of the Vallée d'Arazas. Completed in 1923.

LA RENCLUSE (7038 ft.). Chalet built in 1916 by the Centre Excursionista de Catalunya, on the N. slope of the Maladetta group.

HOSPICE DE VIELLA (5315 ft.). Near the head of the Noguera Valley, S. of the Port de Viella.

CALDAS DE BOHI (4954 ft.). Bathing establishment near the head of the Valley of the Noguera de Ter. S. of Salardu.

ULL DE TER (7628 ft.). Chalet built by the Catalunya Society in 1909. Close up to the frontier, about 12½ miles S.W. of the Canigou.

APPENDIX II.

Description of the Photographs.

No. 1. *The Trou du Toro*. The view was taken looking S.E. towards the Col de las Salanques. The mountain to the right is the Pic d'Aneto.

No. 2. *The Lac d'Espingo*. The C.A.F. opened a new hut here in 1923. The view is taken looking W. towards the entrance of the Val d'Arouge, with the sharp Pic de Leytarous (9344 ft.) on the right.

No. 3. *Lac d'Orédon*. Taken from above the E. end of the lake, looking S.W. The Pic Méchant is on the left, and a portion of the Pic Campbieil is visible in the distance on the right. Both have a sprinkling of fresh snow.

No. 4. *Mountains near Bujaruelo*. The view was taken some little distance down the Spanish side of the Port de Gavarnie,

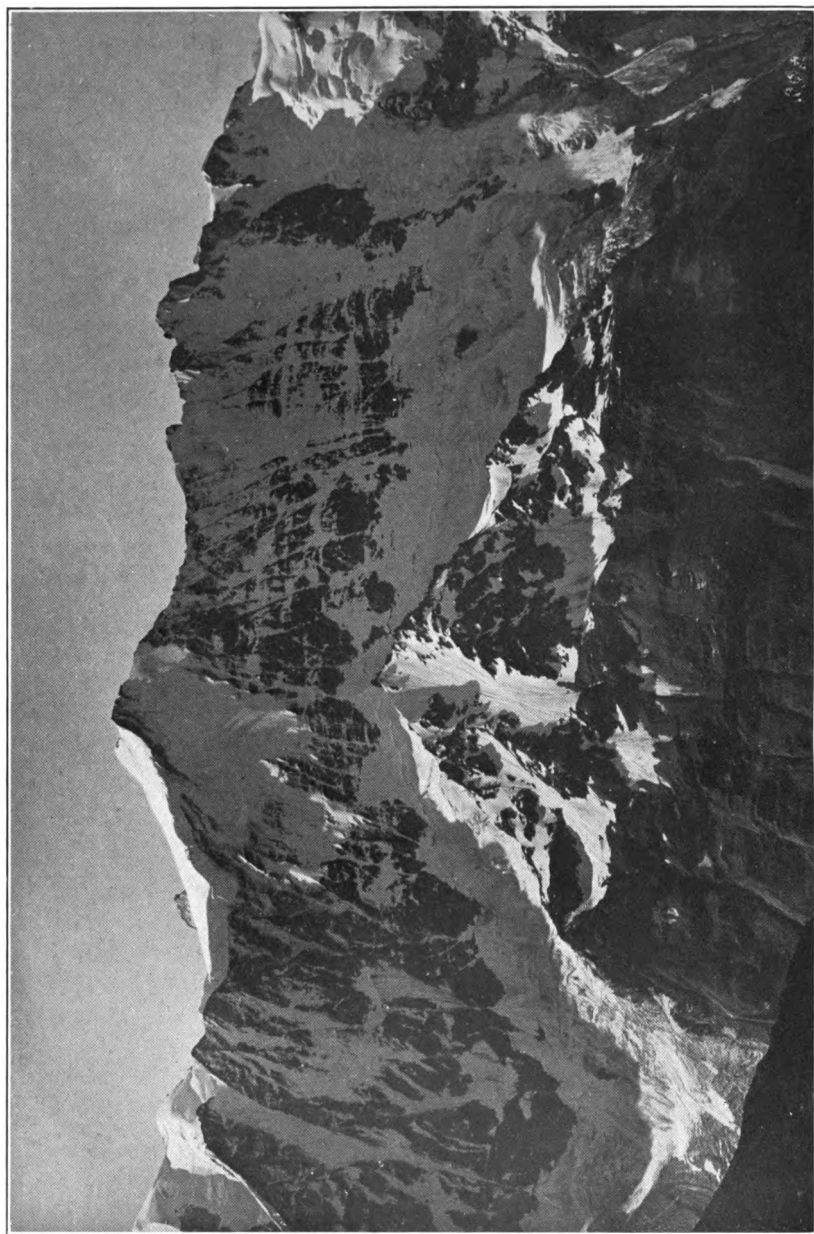


Photo Wehrli A.G.

LÖTSCHENTALER-BREITHORN and BREITLAUHN from TSCHINGELHORN.

looking into the Rio Ara Valley. The curiously streaked peak to the left is the Peña de Otal (8862 ft.), with the Tendeñera (9351 ft.) on its right. The pass on the right of the latter leads over to Panticosa.

No. 5. *Bujaruelo*. Looking down the Ara Valley. The near large building is the guard-house, with the posada just beyond.

No. 6. *The Rio Ara Valley above Torla*. The view was taken from above Torla, looking northward to the Escuzana. The main valley leads to the left to Bujaruelo, and the Vallée d'Arazas strikes eastwards between the Escuzana and the dark cliff on the right.

No. 7. *Ordesa, Vallée d'Arazas*. The small white buildings in the centre are the Hôtel de la Brèche de Roland, run by Pierre Vergez. The lower hotel, run by Viu Ramond, is just visible through the trees. The mountain is the Escuzana, with the entrance to the Cirque de Salarus to the right.

No. 8. *Vallée de Pinède*. The view was taken at the tree-line below the Port de Pinède, looking S.W. down the valley.

MEMORIES OF THE BALTSCHIEDER THAL.

By GEORGE YELD.

I N 1884 I spent some pleasant days in the Lötschenthal. I had with me Alphonse Payot and Seraphin Henry (of Courmayeur). The little hotel at Ried was our headquarters. In those days the landlord was as quaint a character as ever found a place in exaggerated comedy—yet withal he served his guests right well. I could tell much of that landlord; but two things may be here recorded—one, how he hunted his fowls, the other how he prided himself on the genuineness of his wines.

I once heard of a village innkeeper in the North of England who, when he was in his cups, was wont to drive his fowls into the garden, fasten the gate, and then pursue them with chip and bone, brick and stone, and any other missile that came to hand. It mattered nothing that he continually fell over vegetables or into bushes: he steadied himself with loud oaths and addressed the fowls with louder reproaches. Great was the cackling and the shouting, and sometimes the slaughter. Well, when chickens were required for the table at Ried, the programme was much the same, only that the female staff were called to help, and added their shrill cries to the uproar. The hunt was strenuous and, of course, successful, but occasionally a hen, attempting to fly the *Lonza ripae ulterioris amore*,

failed to reach that refuge and was carried down and drowned. To appreciate the stern character of the chase you should have seen the landlord returning flushed with victory and a couple of fowls.

And now for his pride in his wines. He also served in person at dinner and brought the wine himself. I asked, let us say, for Fendant. He brought a bottle and set it down. When he came round again I mildly called his attention to it: 'Landlord, this is not the wine I ordered.' 'Sir'—with indignant gesture—'my wines are what they profess to be. If that is not Vin d'Enfer, there is no Vin d'Enfer in Switzerland'—and much more to the same effect, with stuttering asseveration and a heat suited to the locality after which the wine was named. 'I did not say that it was not Vin d'Enfer. I have no doubt it is. I take your word for it—but I asked for Fendant.' Without a syllable he seized the wine, and forthwith produced a bottle of Fendant. By and by I thought it well further to soothe his appeasement with a little gentle flattery, so, as he passed, I said, 'Landlord, this is excellent wine.' Thus did I, thanks to a little diplomacy, become a guest to be treated with every consideration.

Some days later certain travellers, including two ladies, came over the Petersgrat. One of the party opened a conversation with me by some ordinary question about food. I said that he would probably not find fault with it, and added, 'We dine at seven.' 'Oh, but,' said he, 'we've ordered dinner at 5.30.' I reiterated, 'We dine at seven.' 'You don't seem to think we shall get our way in the matter.' I looked the negative which I did not utter. When seven came, the leader of the Petersgrat party, anxious to lose no time after his long wait, promptly seated himself at the head of the table; but deposition quickly followed. 'Sir,' said the landlord, 'I beg your pardon, but you cannot sit in that chair. It is reserved for this gentleman who has done me the honour to stay in my house for a fortnight.' A genial laugh proclaimed the stranger a good fellow: he vacated the chair, and I took my seat. We soon became great friends, as a good dinner led to a good understanding. So much for the inn of that period.

On a beautiful day, accompanied by the two guides, I went up to the Baltschiederjoch, and then ascended the Breitlauhorn, an excellent view-point, and so got my first sight of the western head of the Baltschieder Valley. Some days later we again reached the Baltschiederjoch, with the intention of crossing to Visp and climbing a peak on the way, but

fog and heavy rain prevented us from even seeing the desired summit, and so we hurried to Visp in, I suspect, record time. Thus my wishes for a knowledge of the Innerer Baltschieder-firn and of the main part of the valley remained unsatisfied, thanks to those malignant fosterers of ignorance, rain and mist.

Four times since has that ill fortune repeated itself, and I have been tempted to agree with those who describe it as a vale

‘That there are none to praise,
And very few to love.’

But though it treated me unkindly, I cannot forget that I had it to myself. I spent one night in a rather dilapidated chalet, two in an airy cave, two in a lair into which we crawled, and in which you must move about on your knees if you would not break your head against the roof. There was no Club hut in those days. You felt no unhappy moments such as huts in popular valleys breed in those who would have the lonely places of the mountains to themselves :

‘For every moment is expectancy
Of more arrivance.’

At the Baltschieder chalets I once saw the swine driven into their unsavoury den. The whole interior was fully occupied when a laggard arrived and, with the assistance of the swineherd's boot, was propelled on to the backs of the closely packed crowd. Do I then suggest a parallel? No, no, far be it from me, but I would rather face discomfort in ravine or cavern where no man comes than make one of a crowd, even if, like Macbeth, they were all full of the milk of human kindness. And if I need plead justification, how often have I heard genial-minded climbers bestow a by no means restricted vocabulary of abuse on the hut where they sought comfort and found its nauseous opposite!

But to my story. The happenings of 1898 I reserve till last. In 1901 Tempest Anderson and I, with François and Sylvain Pession, went up in doubtful weather to the Baltschieder chalets. We carried blankets and other necessities for sleeping out. The weather quickly worsened, and the prospect of reaching our proposed sleeping-place vanished. So Anderson and Sylvain returned to Visp, while François and I—for I was unwilling to lose even a remote chance of a climb—were left behind in the heavy rain and the possession of an ancient

hay chalet on the other side of the torrent from the pig policies. A kindly woman with two children suddenly appeared and did what she could for our comfort by cleaning the floor of the chalet and fetching a bundle of sweet hay to serve as our bed. She also supplied our chamber with a door which it previously lacked. We returned her hospitality with some wine and food and made friends with the children.

Then the woman said that she must show us her pet pig. In front of the place where he was kept was a large square morass of semi-liquid cow manure—black and of an evil smell. The pig was no sooner released from his sty than suddenly with a loud snort he sprang into it, and emerging with another snort on the far side, raced away for some distance, while oilily bubbled up that loathsome mere. Then he returned, apparently cured of his saltatory madness, came close to his mistress, and then again, whisking round with a louder snort than ever, repeated his dreadful dive. We had hastily withdrawn to a safe distance from this auld reekie among swine.

The next morning François and I started for our lair under the Grubhorn, spent a chilly night there, woke to a world of snow and mist, and returned unwillingly to Visp.

In 1905 I came again with my friend Canon W. C. Compton, who had with him Johann Stoller of Kandersteg, whilst I had Benjamin Pession. We found a much more comfortable place to sleep in, thanks to Compton's sagacious eye, though it had the disadvantage of being considerably lower down—a really excellent high-roofed cave, though not quite top-whole. The next day bad weather descended upon us, and once again the Baltschieder Thal, so to speak, banged the door in our faces like an angry politician.

But I was still minded to try a certain climb from the Innerer Baltschiederfirn, and returned again in 1892. We slept in the same cave as Compton and I had occupied in 1905, and met with the same fate. The only interlude was the sight of a large red fox which had caused some havoc among the sheep which tenant the upper part of the valley, though we were not so fortunate in our natural history experiences as the *littérateur* who on the Morterasch at Pontresina heard 'the piping call of the marmosets in the rock valley below.'

And now for my one piece of good fortune. On August 14, 1898, François and Sylvain Pession and I slept in the guest-hole first occupied by Dent's party in 1878, and awoke the next morning to be greeted by a glorious day. There was to

be no mist, no rain, no snow, no raging wind—nothing but sunlight and a cloudless heaven.

Crossing the Innerer Baltschiederfirn, we reached the Breitlauhorn-Breithorn ridge without trouble, and there stayed a short time. We left behind us an empty bottle, which was found by Mr. R. G. L. Irving's party in 1907, when they traversed the whole ridge from the Breitlauhorn to the Breithorn—a glorious expedition.

We then turned to our right to a bold array of towers which studded the ridge pretty thickly. We climbed them all. One or two gave us interesting work. By and by we arrived at the W. snow ridge of the Breithorn, along which our way seemed almost a walk right up into heaven. The day was perfect, and the biting wind, which so often chooses sharp arêtes for its playground, was not abroad. Such cornices as there were we were able to see clearly before we came to them, and so all risk of walking on them was avoided. Such a heaven-aiming, sun-illuminated pathway had delighted me on the Gran Paradiso in 1879, when I spent a most memorable day in crossing over the Piccolo and the Gran Paradiso from the Herbetet chalet to Ceresole Reale with Alphonse Payot; and again on the Aiguille de Chardonnet in 1881, on the most delightful expedition I ever enjoyed in the Mont Blanc Group. Never can I forget those glorious hours of fine weather set like a jewel between two days of desperate downpour. Then Ulrich Almer was my leading guide, and my only regret was that G. P. Baker had left us on the previous morning after a month's unforgettable campaign. On the famous ridge of the Lyskamm in 1877, my leading guide, though he cut countless steps with vigour and skill, shook my confidence. I was not then well experienced in corniced ridges, but as we were passing I observed a tiny crack, so it seemed to me, between us and the actual ridge of the mountain, *i.e.* we were really on the cornice. I said to the leader, 'Is not this a dangerous place?' To which he replied, 'It is only for a minute.' Could a more fatuous answer be imagined? Could calamity be more openly invited? This happened shortly before the terrible Lyskamm accident, in which two travellers and three guides were lost by the giving way of a cornice. I have always believed that the fatal spot was the one where I saw the little crack: with the mind's eye I can see it still.

But to return to the Breithorn. We enjoyed marvellous views down the great icy cliffs into the Lötschenthal. It really looked as if a slip would mean a header into the Lonza,

whose roar rose up to us. Before we reached the top we came to a sort of fairy flying bridge of much too fragile and airy a nature to venture upon, so we passed below it on the S. side. It was

‘A sight to dream of, not to tell.’

We had a splendid panorama from the summit, and I regarded with much satisfaction across the deep valley below us the Lauterbrunnen namesake of our peak, which had greatly attracted me from the Wengern Alp on my first visit to the Alps, and which I had climbed with Alphonse Payot and Seraphin Henry in 1884. We then turned our steps to the other summit of our peak, and soon began the descent to the Bel Alp. I was much pleased at the skill with which the guides picked up the way through the ice-falls. I do not think they wasted a step. Then we splashed through the snow morass at the corner opposite the Ober Aletsch hut. After a final struggle with that horrible ‘corkscrew,’ which has so often been anathematised by the traveller who mounts it after a long day’s work, we reached the Bel Alp and rested there contentedly,

‘As after much turmoil
A blessed soul doth in Elysium.’

SOME 1911 CLIMBS.

By J. W. WYATT.

THE climbing season of 1911 will be remembered as an exceptional one—continuous dry and sunny weather practically throughout—the higher peaks freer from ice and snow than they had been for years—huge crevasses and yawning bergschrunds—and, particularly later in the season, considerable danger from falling stones.

The late E. T. Compton was staying with me at Champéry, and we planned a 6-days’ climbing trip *via* Bourg St. Pierre, over the Grand Combin and Mont Velan to the Great St. Bernard, and thence to Courmayeur and Chamonix.

Leaving Champéry on July 19, we picked up my old guide, Joseph Lochmatter, and his brother, Gabriel, at Martigny and reached Orsières at 3 P.M. We had a hot and dusty walk to Bourg St. Pierre, passing through the curious and rambling

village of Liddes, all of one street, uphill, with an approach chapel at each end ; we noticed some good wrought-iron work in the balconies of some of the old houses. Bourg St. Pierre is a combination of picturesqueness and dirt, seemingly content with its one historical incident. We fought shy of the Hôtel du Déjeûner de Napoléon 1^{er}, and put up at the simple and comfortable little Hotel du Combin just past the village.

I had a look round Correvon's Alpine garden, 'Linnæa,' close to the hotel. It is a fine and well-arranged collection of alpiners from all parts of the world, and divided into specimens from the four continents : the best were over, and they seemed to be suffering from the exceptionally dry weather.

The following morning we walked up the wild Valsorey glen to the Cabane, a comfortable, clean, and well-found hut, unfortunately burnt down in 1924, which we had to ourselves for the two nights we spent there. The alpine flora all the way up was very fine : *Gentiana nivalis* in quantity, and *Sempervivum arachnoideum* in full flower on the rocks and very effective ; round the Cabane, *Primula minima*, *Androsace rosea*, *A. Chamæjasme*, and *A. glacialis*, etc., etc., and *Ranunculus glacialis* like a weed.

At 3.15 A.M. next day, July 21, we left for the traverse of the Grand Combin *via* the Valsorey arête. This arête from the Col du Meiten is a very fine rock climb of fully 1500 ft., steep but excellent rock, with very long reaches. We climbed partly along the arête itself and, where too precipitous, by traverses, couloirs, and chimneys. Crossing over the Combin de Valsorey we reached the summit at 9 o'clock—2 hrs. 40 mins. from the Col. We were rewarded with a fine and comprehensive view, almost the whole of the Alps being visible.

On leaving the top we followed the snow arête for a short distance, and then traversed down a steep slope of hard *névé* to a snow plateau at the head of the Corridor. The Corridor is not a cheerful-looking place—immense séracs overhanging a steep slope of smooth rock down which there were evidently frequent ice-falls, judging from the way the slope below was strewn with them right down to the glacier—blocks of all shapes and sizes up to that of a small cottage. We lost no time in getting through them and breathed more freely when past the danger zone. We then skirted right round the N. face of the Combin to the upper plateau of the Corbassière glacier ; from here to the Col des Maisons Blanches the heat was oppressive, and Compton and I both suffered from bad headaches in consequence. After a long rest to recover from

the effects of the heat stroke, we started down the couloir which drops into the Valsorey glen, and had a rough and steep scramble over slabby rocks on the left side of the couloir to the ridge overlooking the Sex du Meiten and glissaded down snow-slopes back to the hut, which we reached at 12.55 P.M. Compton, with his usual energy, made some good sketches of the evening lights on the mountains; the view from this hut is always fine and grand, but this evening it was specially impressive with a wonderful sunset over the Mont Blanc range; the valleys were filled with purple mist, and Mont Blanc itself, with its lesser peaks and aiguilles, showed up sharply cut against the evening sky.

The next morning we left shortly after 3 A.M. for the traverse of the Velan. At first we had a rough and uncomfortable drop in the dark of over 1500 ft. down to and across the Valsorey glacier to the rocks at the foot of the Mont de la Gouille. We turned the ice-fall by the moraine and exposed rock-slopes and rested for half an hour, admiring the early morning play of light and shade on the Valsorey ice-fall. There is a rich flora on these rocks, in particular *Campanula cenisia* and *Artemesia mutellina* (Edelraute). We then crossed the glacier to the E. side and climbed up steep and much crevassed slopes of *névé* to the watershed on the S.E. slope, from whence a short climb brought us to the great snowy Dôme or plateau of the Velan at 8.50 A.M. It is a fine view-point in all directions, the Grand Combin rising magnificently to the N.; to the S. an extended view over Italy, the mountains of Cogne, etc., and in the far distance the Lake of Geneva.

There was a sharp cold wind on the top, and Compton did some rapid sketching under considerable difficulties.

We left at 9.45 A.M. and crossed first to the N. point of the Dôme by the Aiguille du Velan, but the rocks, hanging ice-fall, and crevasses did not look inviting, so we turned back to the part of the Dôme at the head of the long W. arête. Here we met a party coming up who told us the best way down was to follow the arête to the Glacier de Proz if for Bourg St. Pierre, but, for the Great St. Bernard, to turn off the arête to the left a short way down and follow a steep couloir on the S. side to a slope of *névé*. This we did and had some long and fine glissades right down into the wild and secluded Combe de Moulana. At noon we had a good and refreshing halt on an island of velvety turf surrounded by a stream of clear spring water and carpeted with gentians and other alpiners. We left again regretfully at 12.50 P.M., and had a long and tedious traverse

up and down, across steep rocks, grass-slopes, and gullies, first over the ridge of Les Rayons de la Madeleine, then round the Menouve glen till we struck a track leading to the Col de Menouve at the head of this glen. On the way we surprised a mother ptarmigan and all her young chicks—little fluffy things that seemed quite capable of looking after themselves and hiding among the stones; the mother fluttered round us for a bit and then departed, but, after we had gone on, we were glad to see her return to her family. The Col de Menouve, which we reached at 2.35 P.M., is a double col, a N. branch leading to the Cantine de Proz and a W. branch, which we took. Crossing the Plateau de Tcholaire, a well-watered flowery plateau overlooking the road to the Great St. Bernard, we reached the hospice by the Combe des Morts at 3.45 P.M.

We rang the big bell and a nice-looking padre showed us into a large, panelled, double-bedded room, with good beds, very well furnished, and containing portraits of Queen Victoria, Prince Consort, and the Prince of Wales (Edward) as a boy; we did not expect such luxury. We had exhausted our provisions and were very hungry, and so begged for something to eat, and also some hot water to wash in. Washing with hot water was evidently not understood, for we got none, but found prepared for us in the refectory a bottle of red wine, bread and cheese, *hot water* and sugar! We inspected the dogs, and went into the chapel, which is nothing architecturally but there is some rather good seventeenth-century carving in the stalls. The salon is a large room with a big row of cases full of picture postcards; just before dinner a lay brother appeared and did a good business in postcards to a varied crowd of people. At 7 P.M. a bell rang and about forty of us marched to the refectory; the fare was rough but sufficient, with *vin ordinaire*.

The next morning we were wakened by the chapel *carillon* for early mass. They gave us a good breakfast—*café complet* with excellent honey and butter. After depositing our offerings in the chapel box, we left at 7.50 A.M. As we had no provisions left, we begged the monks to provide us with enough to take us to Courmayeur; this they very kindly did, although quite against their rules.

An hour's walking brought us to the Col de Fenêtre, overlooking the three little Lacs de Fenêtre. From here we climbed up the ridge of Les Vans, about 400–500 ft. above the Col where we had a fine view of the N. part of the Mont Blanc range—the rocks of the Grand Golliaz close by were very striking. We

the effects of the heat stroke, we started down the couloir which drops into the Valsorey glen, and had a rough and steep scramble over slabby rocks on the left side of the couloir to the ridge overlooking the Sex du Meiten and glissaded down snow-slopes back to the hut, which we reached at 12.55 P.M. Compton, with his usual energy, made some good sketches of the evening lights on the mountains; the view from this hut is always fine and grand, but this evening it was specially impressive with a wonderful sunset over the Mont Blanc range; the valleys were filled with purple mist, and Mont Blanc itself, with its lesser peaks and aiguilles, showed up sharply cut against the evening sky.

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up and down, across steep rocks, grass-slopes, and gullies, first over the ridge of Les Rayons de la Madeleine, then round the Menouve glen till we struck a track leading to the Col de Menouve at the head of this glen. On the way we surprised a mother ptarmigan and all her young chicks—little fluffy things that seemed quite capable of looking after themselves and hiding among the stones; the mother fluttered round us for a bit and then departed, but, after we had gone on, we were glad to see her return to her family. The Col de Menouve, which we reached at 2.35 P.M., is a double col, a N. branch leading to the Cantine de Proz and a W. branch, which we took. Crossing the Plateau de Tcholaire, a well-watered flowery plateau overlooking the road to the Great St. Bernard, we reached the hospice by the Combe des Morts at 3.45 P.M.

We rang the big bell and a nice-looking padre showed us into a large, panelled, double-bedded room, with good beds, very well furnished, and containing portraits of Queen Victoria, Prince Consort, and the Prince of Wales (Edward) as a boy; we did not expect such luxury. We had exhausted our provisions and were very hungry, and so begged for something to eat, and also some hot water to wash in. Washing with hot water was evidently not understood, for we got none, but found prepared for us in the refectory a bottle of red wine, bread and cheese, *hot water* and sugar! We inspected the dogs, and went into the chapel, which is nothing architecturally but there is some rather good seventeenth-century carving in the stalls. The salon is a large room with a big row of cases full of picture postcards; just before dinner a lay brother appeared and did a good business in postcards to a varied crowd of people. At 7 P.M. a bell rang and about forty of us marched to the refectory; the fare was rough but sufficient, with *vin ordinaire*.

The next morning we were wakened by the chapel *carillon* for early mass. They gave us a good breakfast—*café complet* with excellent honey and butter. After depositing our offerings in the chapel box, we left at 7.50 A.M. As we had no provisions left, we begged the monks to provide us with enough to take us to Courmayeur; this they very kindly did, although quite against their rules.

An hour's walking brought us to the Col de Fenêtre, overlooking the three little Lacs de Fenêtre. From here we climbed up the ridge of Les Vans, about 400–500 ft. above the Col where we had a fine view of the N. part of the Mont Blanc range—the rocks of the Grand Golliaz close by were very striking. We

descended then over scree and snow into the wild Ban Darrey valley, disturbing many colonies of marmots. We reached the head of the valley below the rise to the Col du Ban Darrey at 10.35 A.M., and camped on a grassy spot for half an hour's rest. This valley has a good and rich flora, *Saxifraga biflora*, *Viola lutea*, etc., etc. The only signs of life we saw were a fine herd of the handsome *race brune* cattle, and a surveying party on the hills above us under a large white umbrella. From here we had an hour's stiff climb of 1500 ft. to the top of the Col, where a splendid view burst upon us of the whole Italian side of the Mont Blanc range from Mont Blanc itself to the Tour Noir. We had some 1500 ft. of fine glissades down La Combette to near the Pré de Bar chalets and then down the Italian Val Ferret to Courmayeur, which we reached at 5.20 P.M. I was struck with the remarkable wealth of flowers the whole way. The lower part of the valley from La Vachey past Entrèves is very pretty, and all the way down one is rewarded for a rather long and tiring tramp by a series of exceedingly grand and impressive views of the mountains; particularly the Grandes Jorasses and the Aiguille Noire de Pétérét with its wonderful drop into the Courmayeur valley. We put up at the Hôtel Restaurant Savoye at the farther end of the village, which Compton knew and recommended; we were very tired and found it hot and stuffy, but felt better after a hot bath and shave. We met Eckenstein there and had an excellent dinner washed down with two bottles of Asti Moschata, Compton having put the proprietor on his best behaviour. There was a heavy thunderstorm and pouring rain all evening.

The next morning, the 24th, we left at 4.5 A.M., rather late for our long day. We went up the usual way past Mont Fréty to the Rifugio Torino on the Col du Géant. The views of the Pétérét ridge on the way up are magnificent, but we found the 7000-ft. climb steep, hot, and very trying after our four days of hard work, accentuated, no doubt, by the two bottles of Asti the evening before! After a good two hours' rest we crossed the Col and stopped to admire the wonderful sight suddenly opened up to us; a great contrast to the Italian side. It was quite clear on the N. side, the mists were streaming past the watershed from Italy and feathering away into the deep blue sky; the effect was exceedingly fine.

We had an easy tramp down the glacier as far as the great ice-fall, which this year was much broken, intricate, and complicated, and took us an hour to work through it. The Aiguille

Verte looked in excellent condition and very tempting, and Lochmatter urged us to go to the Couvercle and climb it next day, but neither of us felt energetic enough to do so. We unroped on the dry glacier at 2.20 p.m. and reached Montanvert two hours later. The hotel and Mer de Glace were crowded with tourists and, after our wild and inspiring experiences of the past few days, we appreciated the feelings of Christian when he entered Vanity Fair! After a rest for tea we walked down to Chamonix and spent a comfortable night at Couttet's, and left the following morning for Champéry.

During the six days we had climbed some 26,200 ft. and descended 25,700 ft.; as our combined ages were 115 years, we thought we might reasonably pat ourselves on the back!

In September of the same year Cooke-Smith and I planned a trip to include the Aiguille Verte, the Grépon, and Mont Blanc, and we left Champéry on the 10th for Chamonix. My usual guides being engaged, we took Raphael Lochmatter, with whom I had done the Matterhorn some years before, and Heinrich Pollinger, of Herbrigen. We provisioned at Chamonix in the afternoon, and on going to the *pâtisserie* for a plum cake were referred to the *charcuterie*; the cake was excellent, but we wondered what it might be made of! Wollaston was at Chamonix, and said we should meet him at the Couvercle; also Whymper, who was looking very feeble.

The next day we walked quietly up to Montanvert where we met Miss Pickford just starting for the Couvercle *en route* for the Verte.

The following morning we left for the Aiguille du Tacul, both as a training walk and for photographing. The grand series of views from this peak recalled Browning's words: 'God's own profound was above me, and round me the mountains.'

The dirt bands on the Mer de Glace were showing up distinctly and I got a good photo of them. We descended by the N.W. face and arête, which is steep and very rotten, crossed the Leschaux glacier, and reached the Couvercle at 2.20 p.m. We spent the afternoon gazing at the marvellous wealth of ice and rock scenery from this hut. One appreciated the sentiments of the Swiss poet, Philippe Monnier—'devant l'espace immense où les paroles sont rares et les minutes longues.'

We brewed some tea and prepared hot water for Miss Pickford and her friends, whom we saw returning from the Verte. They gave an alarming account of the state of the Verte—

perpetual stone-falls in the couloir all day—the bergschrund so bad that it was impossible to get on the Moine arête from the glacier, and they had to cross the bottom of the couloir to the rocks on the right and then recross higher up to the Moine arête, under fire all the time. On the way down the stone-falls were so frequent that they were afraid they might have to spend the night on the rocks and cross the couloir in the early morning. The guides considered the ascent most risky under the present abnormal conditions, and said they would not do it again for 1000 francs ! Later on Wollaston turned up and a French barrister of the name of Cail, both bound for the Moine. There was great discussion among the guides as to our proposed venture on the Verte the next day, and very evident general opinion on the danger of the ascent.

Next morning we got up shortly after 2 A.M. and found Pollinger had ricked his side cutting steps on the Tacul, and Cooke-Smith, having passed a sleepless night, didn't feel equal to another stiff climb that day ; so we decided to give up the attempt that day, go to sleep again for a few hours, and then have a look at the Verte after the other parties had left for the Moine. We went up the moraine, and, during a long discussion as to whether we could strike the Moine arête much lower down and avoid the couloir entirely, a huge avalanche of rock and stone came down the Droites with a noise of thunder, the smoke and dust from which hung about for long after ; this was followed by a smaller cannonade down the Verte couloir itself. Being both married men, and having promised our respective wives to run no undue risk, we decided the Verte was not for us under present conditions ; we were much disappointed, 'mais on ne saurait qu'y faire.' We took a turn round the Jardin, and went back to Montanvert by the Pierre à Béranger. Just before leaving the ice for the Montanvert path we saw the traces of a large rock-fall from the Petits Charmoz, evidently quite fresh, as we had heard the noise of the fall a short time before. From all sides one heard of the unusual risk of stone-falls late this season, and our experience fully corroborated it ; one could not but remark on the unusual blackness and freedom from snow of all the higher peaks. Wollaston and Cail turned up later and told us that stones were falling on the Verte the whole time they were on the Moine and considered we showed much wisdom in giving up our attempt ; which was consoling, at any rate.

As the weather did not look particularly settled we decided

to go for the Grépon at once, so the following morning, the 14th, we left Montanvert at 3.10 A.M.; it was bright moonlight and lanterns were not required. We followed the usual route to the Rognon, where we caught up a guideless party of three Frenchmen from Plan de l'Aiguille going to photograph on the Grands Charmoz, one of whom was Casella, the Paris journalist.

The upper part of the glacier was much broken and crevassed; to our right above some steep rocks there was a regiment of toppling séracs under which we had to pass, and which we had cause to remember later in the day. We cut up the ice-slope till we were pulled up by a huge crevasse running right across the glacier, about 20 ft. deep, very wide and spanned by two rickety-looking ladders tied together. We reached the bottom of the couloir between the Grépon and the Charmoz at 7.20 A.M., where we left all our ice-axes but one, and soon arrived at the bottom of the famous Mummery crack. We went on two ropes, Lochmatter with me, and Cooke-Smith with Pollinger. Lochmatter led up the crack and I followed, and got on fairly well till about half-way up, where a chock-stone is bedded far in the crack; this beat me and I had to have assistance from the rope—after that it becomes by comparison easier. In such places one cannot but be filled with admiration for the leading man, and particularly for the first man who attempted it.

The route up this famous rock peak has been so often described that it would be superfluous on my part to detail it; but my general impressions of the climb are still vivid. Pollinger showed us a neat and comfortable way of coming down on a spare rope—hold the rope in the left hand and pass it between the thighs, under the right thigh and over the right arm just above the elbow and let the slack fall vertically from the right arm; by keeping the right elbow pressed close to the side, one was held, and by raising the elbow up and down again one let oneself down—it worked very well. The top is simply the highest pinnacle on the ridge, and is an enormous mass of granite, precipitous on all sides, and capped with a huge flat stone like a toad—hence, I was told, the name, Grépon being a local patois for 'crapaud.' The view was very fine, but the weather looked very threatening over Mont Blanc and the Col du Géant—a break in the weather evidently very near.

After a few minutes on the top we descended to the foot of the final pinnacle, and then came down the usual way

below the Pic Balfour and the C. P. platform to the head of the Nantillons glacier, where we touched snow again, not having seen ice or snow anywhere on the peak.

The weather now looked very bad, the clouds covered the tops, and it began to snow—we wished we were well off the Nantillons glacier. We zigzagged down through crevasses and schrunds till we were pulled up by a big one, too deep a drop to jump, and we had to lower ourselves into the depths on the spare rope and cut up the other side. We recovered our ice-axes, and immediately below the huge laddered crevasse before mentioned, a large and fresh fall of séracs from the ice-cliffs above had fallen right across our morning track and made us hurry on, particularly as the snow was turning to rain. We ran as hard as we were able past the line of séracs, and no sooner were we through them than we heard a roar behind us, and saw a large rock-fall from the Blaitière come right across our track, and disappear into the big crevasse; we were safe, but still not out of danger, and were glad to reach the Rognon rocks again. The Frenchmen, whom we met next day at Chamonix, told us that while descending the Charmoz they saw a large slab of rock come thundering down the big couloir where they had seen us a short time before and thought we were done for; it appeared to us that, in giving up the Verte for the Grépon, we had fallen out of the frying-pan into the fire!

We reached Montanvert at 4.55 p.m., tired, very wet, and stiff about the knees, each of our party having destroyed a pair of breeches!

I cannot recall a climb, even the more difficult rock climbs in the Dolomites, that impressed me so much as the Grépon; it is a vicious mountain throughout, passively on the rocks and actively on the approaches. One appreciates more fully than ever the great difference between the man who leads on such a climb and the others who follow after. I was struck also with the advantages of two on a rope on a climb of this kind—not only is the climbing more rapid but, I think, also safer, as one has more freedom to move quickly out of the way of falling stones, etc.

The average angle of the two Grépon faces must be high; from a careful examination of the new Barbey map I made out the average slope of the Nantillons face to form an angle of 70° – 72° , and that of the Mer de Glace face 66° – 68° .

The weather next morning, the 15th, was bad, and glimpses of the Dru and Grandes Jorasses showed a heavy fall of snow

in the night. Our guides considered the mountains off for at least two or three days, so we decided to pack up our traps and take the forenoon train to Chamonix. We left Cail determined to try for Mont Blanc—this being his third shot at it; he went off to the Grands Mulets for the night, but the following morning at Chamonix we saw his guides returning in the rain.

That afternoon we met Casella and his two friends in Chamonix, who showed us some excellent and very effective photographs of the Grépon and Charmoz, taken with a panoram camera. He also told us he was dining with Whympers a night or two before, who seemed much broken and feeble, and who told him that nearly every night now he had dreams or nightmares of the accident on the Matterhorn—Whympers died at Couttet's the next day.

We met the Pickfords again at Couttet's, and Lord Sterndale (then Mr. Justice Pickford) told us a good story about our guide, Pollinger, when he was a lad. He was known as the 'imp,' owing to his scrapes and mischievous ways. He practised his rifle on the weathercock of St. Niklaus church spire and did so much damage that the commune stepped in, fined him, and at the same time offered a reward to anyone who would go up and repair it. Pollinger undertook the job, got the reward, and paid his fine with it!

The following morning, the 16th, we left by the noon train back to Champéry in mist and rain all the way to Martigny.

Besides various scrambles among the peaks round Champéry, my only other climbs for that season were:

Two guideless climbs up the Cime de l'Est of the Dents du Midi, in the first of which we had a bombardment of falling stones from the Doigt, fortunately with no damage done.

A fine but short rock climb up the Dent Jaune.

The Tour Sallières by the Grande Pente of the Glacier du Mont Ruan and the S. face.

An interesting first ascent of the N. arête of the Dents Blanches de Champéry, with Gover, by the Pas de la Bida and Lauche-des-Aulx.

THE COL DU LION.

BY EDMUND G. OLIVER.]

FOR some years past I had contemplated the possibility of an attack on the Col du Lion. I had wondered whether the sinister reputation of the climb frequently recorded in Alpine history was wholly deserved. I had finally come to the conclusion that if the expedition were attempted early in the season and so conducted that the top of the col could be reached before midday, the danger of falling stones might be eliminated or greatly minimised, and a fine ice climb might thus be brought within the limits of prudence for a party of experience. Last summer I confided my idea to Adolf Aufdenblatten, who, though at first he was not encouraging, eventually thought my plan might be worth considering. Finding that Whitsun fell late this year, I decided to go to Zermatt for the few days of the Whitsun vacation in order to give the expedition a trial. The precedents certainly were not encouraging. So far as I could ascertain, the col had been traversed altogether six times. It was first crossed from Zermatt to Breuil, on July 6, 1880, by Mr. A. F. Mummery with Alexander Burgener of Eisten; and Mummery in his book gives a sensational account of the difficulties and dangers they encountered.

On July 2, 1881, the redoubtable Burgener, this time accompanying Dr. Paul Güssfeldt, reached the top of the col from the Italian side at 10 A.M. and descended the Swiss side. The top part of the couloir was all ice, where, the previous year, there had been snow. They were exposed to volleys of stones, and were compelled to spend the night in great danger and discomfort at a height of about 11,000 ft. in an insecure position in the middle of the couloir, only completing the descent next day.

The col was subsequently crossed from Zermatt to Breuil, viz. by Herr von Kuffner with the same Alexander Burgener and Alois Kalbermatten, by Mr. W. M. Baker with the elder Aloys and his son Josef Pollinger, and by MM. A. Spoerry and Simon with J. A. Favre and A. Truffer about July 27, 1906. Mr. J. H. Wicks also crossed the Col in the eighties, his leader being Theodor Andenmatten of Saas. I have not been able to obtain details of these expeditions.

When I arrived in Zermatt it was real Föhn-Wetter: the rain was descending in torrents, and I was informed that warm and unsettled weather had prevailed for some weeks.

We held a council of war, and decided that if we could get one fine day and a cold night followed by another fine day, and above all no south wind, the conditions would be favourable. Whitsunday was wet, but the weather showed signs of clearing, and on Monday morning, though the valley was full of cloud, we ascertained by telephoning to the Gornergrat that it was quite clear high up. Having previously ascertained by inspection that there was no cornice, we walked up to the Schönbühl hut in the afternoon, admiring the carpets of Alpine flowers of every description which adorn the Z'Mutt valley at this season. The party consisted of Adolf Aufdenblatten, his brother Alfred, and myself, a porter accompanying us as far as the hut. We started at 1.30 A.M. on Tuesday, June 10: we crossed the Z'Mutt glacier and, passing close to the bivouac place for the Z'Mutt ridge, reached the foot of the couloir below the Col du Lion at 4.20. My anticipations were well founded—better even than I had dared to hope. Not one single stone was to be seen on the snow below the bergschrund. The sun would not shine on the couloir until midday. The prospect of a safe passage opened attractively before us. We halted for a quarter of an hour to put on our crampons, and I had a good look at the route. We had already roped before reaching the Z'Mutt bivouac, owing to holes and crevasses which had unexpectedly presented themselves.

We could not, of course, see all the way up to the top of the col from this point, as there is a sharp bend about half-way up the couloir. But what struck me most was that the couloir was much broader throughout than I had imagined. In fact, the top section is quite broad, if we include in its breadth the masses of rock which project in two or three ribs from the ice and snow.

In the middle section the ice or snow, as the case may be, is reduced to two narrow ribbons with rock jutting out between them, and here the breadth of the whole couloir is much less, though still more than I had believed to be the case. The lower part spreads out like a fan to join the slopes below the Matterhorn and the Tête du Lion, so that one does not really get inside the couloir for a considerable distance above the bergschrund.

Starting again at 4.35, we got over the bergschrund (which could have been passed almost anywhere) without much

difficulty at 5 o'clock, and made for some rocks to our right which descended from the Tête du Lion.

Here we suffered our first disappointment: we had hoped for snow, but all was hard ice. For two hours Adolf hacked away before we reached the rocks, and at that rate of progress I reckoned that nightfall would find us still a long way below the top of the col. We therefore decided, instead of continuing straight up the ice, to take to these rocks. It would evidently be possible to reach snow or ice above them, and then to traverse to the left back into the couloir, which we should rejoin somewhat below the narrow part of it which we had viewed from below. The rocks were slabby and cold and far from easy; but after struggling up two or three pitches we had the pleasure of finding our hopes realised, and we stood once more upon snow at 7.30 A.M. From this point we traversed to the left back into the couloir over snow and easy rocks, and to our joy found that this part of the couloir consisted of hard snow and not ice, as we had feared from our previous experience might be the case.

We crossed the couloir on to the Matterhorn side and thence, keeping close to the rocks, made our way rapidly up hard snow for one hour. Our spirits rose. At 9 o'clock we had rounded the bend in the couloir, and stopped near some rocks for a few minutes within full view of the top of the col, which we all thought would be easily reached within another hour.

Our too sanguine expectations, however, were disappointed, and the event proved that the harder part of the task remained to be fulfilled.

Alfred here took the lead, and all was ice. At first we kept as close as possible to the rocks on the Matterhorn side, but the hand-holds we were thus able to obtain were not worth having, and every step had to be hewn out in hard ice. After three-quarters of an hour of this sort of thing I suggested making for a small rib of what was apparently snow, to reach which we had to cross the couloir now immediately on our right. Adolf agreed, and, taking the lead himself, cut straight across the couloir in the hardest of hard ice. When we reached the rib we found snow as we hoped, but, continuing to the end of this rib, we found ourselves again in the ice couloir, with nothing but the hardest of ice between us and the top of the col. It was nearly 11 o'clock, and we seemed almost as far off from our objective as we had been two hours earlier. In this situation we decided to try some rocks on our left (Matterhorn) side, and Alfred was again sent on ahead. He advanced the full length

of his rope, and it was evident from his movements that the place was difficult. I unroped to give him more room, and, when about 100 ft. of rope had run out, he shouted that he was above the rocks. Adolf tied on and followed, and I took the end, but, the rope between Adolf and myself being comparatively short, we spent some anxious moments, alternately scrambling and attempting to stand on smooth and slippery slabs without any apparent hold, and so cold that I had the utmost difficulty in getting any sensation into my fingers. Our crampons here were far from helpful. Alfred could not get a good enough stand to help us much, and for my part I breathed a sigh of relief when we emerged above the rocks on an ice-slope not far below the top of the col. Adolf's keen eye at once detected the line of least resistance, and, crossing to the right on ice where we could get an occasional hold on a rock, we reached the top of the pass right in the middle and at the lowest part at 11.30. We shook hands heartily. The bottle of champagne which we always take on difficult expeditions was dug out of Alfred's rucksack and speedily consumed to the health of the Col du Lion. We basked in glorious sunshine for two hours, and then descended to Breuil, where at Maquignaz' cheerful hotel, the Jumeaux, some bottles of excellent champagne soon disappeared with the aid of our genial host. Next day we returned to Zermatt over the Furgg-Joch, delighted with the success of our expedition, and not unduly depressed by the change of weather which blotted out the mountains for the next three days and effectually prevented us from trying further experiments.

A WEEK-END IN DAUPHINÉ.

By H. R. C. CARR.

IT has not yet become the practice of British mountaineers to compress Alpine expeditions into the hours which custom consecrates every week to rest and recreation. We still live too far away. When travel by air is 50 per cent. cheaper and quicker, we may be able to spend a Saturday night in a hut beside the glacier and fly back on Sunday evening, tired, sunburnt, and happy, straight from the highest snows to the office door; but at present we must confine our

enthusiasm to an annual holiday and leave frequent short visits to the lucky inhabitants of cities within reach.

Recently fortune placed me for several months in that enviable position, and my first experience of an 'Alpine week-end' occurred at Easter (April 20 and 21), when I was the guest of the Club Montagnard Dauphinois, on an excursion to the Tarentaise. I found the proceedings extremely strenuous and amusing. They began at 4 A.M. on the Sunday and ended at 1.30 on the Tuesday morning. In between we sandwiched many a crowded hour of life: tedious hours in trains, hazardous hours in chars-à-bancs, laborious hours transporting ski, hilarious feastings and unquiet repose. Even in the palatial Félix Faure hut a party of thirty-five may be safely considered too large for comfort, but we forgot all minor ills in a splendid run over the Vanoise ice-field on a perfect spring morning.

Five weeks later we planned a visit to La Bérarde in a rather more leisurely manner. I summoned Alfred Couttet from Chamonix, as I wanted to make an attempt on either Les Ecrins or the Meije traverse if it seemed possible and the weather favoured. Alfred arrived to tell me that things were well advanced at Chamonix and that he had been up the Charmoz on May 22; he was very keen to try his luck with the Meije, which he had never seen at close quarters.

We left Grenoble on Friday morning, May 30, my father, Miss Garnett, and Mr. K. Garnett accompanying us for a preliminary exploring expedition on the day before we were to make our serious attempt. At Bourg d'Oisans we were delighted to find the hotel motor waiting, for we had anticipated a long road walk. Its conductor, a grandson of the famous J. A. Carrel, drove us with an *élan* worthy of his family traditions, and the passage of an ice-tunnel through an old avalanche was the culminating sensation of an exciting journey. We spent the afternoon in taking a stroll up the Etançons glen to study the southern walls of the Meije. The inspection raised our hopes considerably, for, in spite of the abundant snow, the steeper rocks were singularly clean and appeared fairly free from ice. Alfred was in high spirits, for the universal pessimism of the local authorities put a fresh edge on his appetite, and by many a subtle argument from past experience and present observation did he seek to build a plausible forecast of success.

On Saturday (May 31) a doubtful dawn saw us half-way to the Châtelleret hut. The Vallon des Etançons has always

been described to me as a waste of stones, but beyond the pastures we walked almost entirely over good snow. At the hut we halted and rather imprudently left our raquettes, for above the moraine the snow became soft and progress toilsome. I was exceedingly glad that Alfred insisted on breaking the trail the whole way. At 8.50 A.M., in 5 hours from the hotel, we reached the Promontoire to find the cabane half buried in a deep drift, and of course the door was at the buried end. After an hour's heavy work Alfred cut a hole down to the door and we could enter our abode. The rest of the morning passed in pursuit of the culinary arts and in ploughing a furrow up to the Brèche. During the afternoon my father and the Garnetts set out to return to La Bérarde, and I watched until their descending figures became tiny black dots on the snows far down the glen.

Alfred and I made a careful study of the hut log-book, but a rough drawing on the back of the door proved more useful than yards of descriptive prose. We turned in early and had a good 10 hours of sleep—I expected more, for the weather continued to look threatening, though the barometer refused to commit itself in either direction. The dawn broke cloudy, with a cold wind blowing strongly from the west, but Alfred's optimism was unshakable, and we got under way by 4 A.M. To meet the possibility of a night at the Refuge de l'Aigle (if the traverse were feasible), there was enough in our sacks for another day on the mountain—a fact which did not encourage us to force the pace. Mounting steadily, we reached the platform near the Pyramide Duhamel shortly after 6, having found the Grand Couloir full of snow which was unpleasantly soft in places. The Muraille Castelnau, towering immediately above, looked a very formidable problem, and one could well understand why so many early attempts ended in failure. Its solution is a continual surprise, for the feeling of glorious uncertainty is delightfully prolonged. First you wander off in hope to the right, but you are soon led back again in trepidation to the very brink of the magnificent slabs which sweep round in an unbroken wall towards the Brèche. Here are two delicate corners where you are exposed to the full force of the wind, and feel you are indeed a long way up a very noble precipice. Alfred went straight ahead with an ever-broadening smile; 'Ah! c'est rigolo!' was his occasional comment. At 8.10 we found what shelter we could at the edge of the Glacier Carré and ate a hurried meal. The high wind was clearing up the clouds, so we saw that the

day was ours despite the cold. Yet the first 150 ft. of the Glacier Carré nearly defeated us, for, as soon as he left the rocks, Alfred went in almost to his arm-pits, and I questioned him anxiously on the possibility of avalanche. He appeared satisfied when, with great exertions, he had run out the whole length of the rope, but we took a line directly upwards, close to the rocks, and after a time the going improved. At 9.15 we reached the Brèche du Glacier Carré and braced ourselves for a battle with the wind on the final peak, wondering what we should feel like on the Cheval Rouge, described as a 'morceau de granit en lame de couteau qui surplombe le glacier de la Meije.' However, the proximity of the summit acted as a spur to our endeavours; at 10.20 we gained the Grand Pic without finding much difficulty in the threatened obstacle, and, seeking a nook out of the wind, we set ourselves to examine the marvellous ridge which we now looked along for the first time.

Our admiration was tinged with disappointment, for the more we looked, the less we liked it. Right up to the Central Peak, which appeared so slender that it seemed to sway in the whirling eddies of cloud, beautifully carved cornices adorned the gaps between the rock-towers, and masses of blue-green ice clad more than one spot where we should have to try to force a way. Alfred took a trial trip on to the snowy northern face and returned, sadly shaking his head. He thought the risk too great, so we reluctantly abandoned our hopes of the traverse, and at 10.45 the retreat began.

We descended in a leisurely manner as soon as we found some relief from the wind, and I was heartily glad when we had passed two places—the lower part of the Glacier Carré and the Grand Couloir. Very soft snow lying at a high angle does not inspire one with confidence, especially when it gives out on to a peculiarly steep precipice; however, Alfred's faith was justified, though I am bound to say I was not greatly impressed by the foundations of his beliefs, which he explained at length as soon as we were off, or rather out of, the snow. Also a sack laden with superfluous provisions and useless crampons becomes a very tiresome burden during a long descent. It was 5.30 before we regained the hut and could make ourselves a welcome brew of tea.

The return to La Béarde was pleasantly free from effort. We sat down at the door of the hut and shot off at high speed, arriving at the foot of the moraine within ten minutes by means of three splendid glissades. The rest was less luxurious,

but in well under two hours we were seated in the comfortable inn, happy at the success of our little expedition and in the knowledge that an excellent dinner was on the way. To add zest to our enjoyment, the storm which had held off so kindly now broke with noisy violence, and made a very charming music to waft us into the land of dreams.

This ascent struck me as being roughly comparable to that of the Grand Dru—though its rock problems are not so hard. Owing to its southern exposure and to the extreme steepness of the crags, the route might be possible even in winter during a spell of calm, fine weather. The traverse is, of course, another matter.

NOTE.—In his interesting article on Les Grandes Rousses (pp. 76-79), Mr. W. M. Roberts omits to mention that the village of Vaujany is the best base for the group—the Refuge de la Fare has not been in use for many years. Vaujany is 2 hours' walk from the tramway at Rochetaillée up the beautiful Flumet glen. Accommodation 'chez Ordu' (two clean beds), and Madame is an excellent cook who will not hesitate to kill the fatted calf—or fowl—if given timely warning.

IN MEMORIAM.

REGINALD HUGHES.

1843-1924.

REGINALD HUGHES, Barrister, D.C.L., died at Auticoli near Rome on June 1, 1924, in his eighty-second year. He was elected to the Club in 1880.

He was a most enthusiastic lover of the Alps, and there were few seasons in which he did not visit his beloved mountains. I was with him in Switzerland in 1899 and 1902, and found him a most charming companion. My climbing powers were then waning, and I could only do a few minor peaks with him, but it was always a pleasure to watch his skill and energy in greater ascents. He had the well-shaped build of a good climber, and I envied the facility with which his lithe body could negotiate awkward corners and protruding rocks.

My experience being entirely amongst the giant heights of Sikkim, Garhwal, Kashmir, and Tibet, he was always asking me for comparisons between these and the Alps, and was never tired of the information I could give him on this subject. I pointed out the

differences between Himalayan and Alpine travel : the independence and freedom of movement in the Himalayas, where one carried one's own tent and commissariat instead of being restricted to hotels as in the Alps. Then there was the absence of life, especially game, fur and feather, in Switzerland, and its abundance in the upper Himalayan regions, where, if the climber were also a *shikari*, he could obtain wild mutton (good and tender) from such animals as the *Ovis Ammon*, barhal, and shapoo ; wild beef from the yak (not always tender) ; venison from deer and several species of wild goats such as ibex, thar, markhor, and ghoral (Himalayan chamois) ; then there were five kinds of pheasants and four of partridges, also occasional hares, snow pigeons, and Tibetan sand grouse, all which made a pleasant break in the traveller's menu.

He was much interested in the Everest Expedition, and we often debated the chance of success. We agreed that, with such experienced climbers, reaching the summit was entirely dependent on fine weather—a very rare chance, however, in the fickle climate of Sikkim.

He had a marvellous memory and never forgot what he had once been told. He would remind me, many years after I had related them, of scenes, incidents, and adventures which I had almost forgotten.

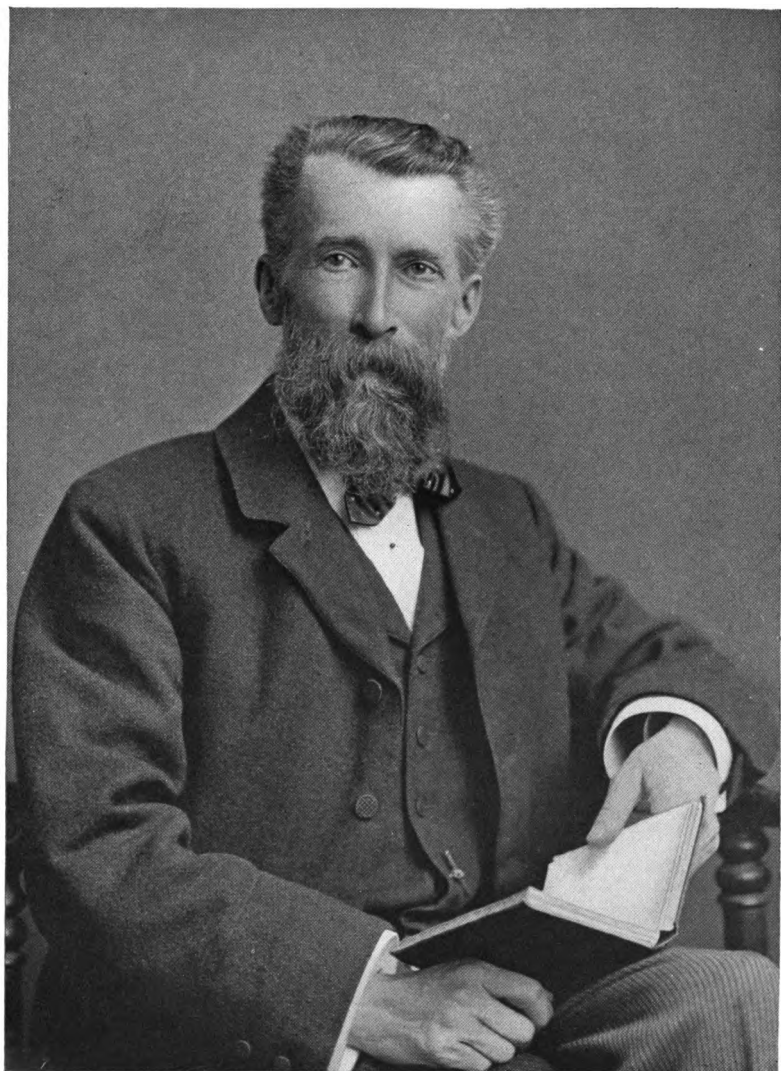
Amongst other accomplishments, his literary attainments in journalism were of a high order. I remember an occasion when, in response to an urgent telegraphic request, he wrote a leading article in a few minutes when about to sit down to dinner. That article created a stir in the political and journalistic world next morning.

Some of his reminiscences of the A.C. dinners, at which he was a constant attendant, may be interesting to members.

He recalled the humorous occasion when he saw Tyndall and Huxley there for the first time as guests of honour sitting next the President—Tyndall on his left, Huxley on his right—when Huxley said, 'Not without intent are we thus placed : for I have been out on the mountains with Professor Tyndall and only too quickly discovered that he was a goat, while I, alas, was only a sheep !'

He also recalled the last speech of Leslie Stephen, unforgettable for its humour and its pathos. Stephen had then become stone deaf. Bryce had in eloquent words proposed his health ; the response was enthusiastically manifested by cheering and clapping of hands. Stephen only *saw*, but in reply made an admirable speech notwithstanding, remarking that it was probably the first time in history that a man had to reply to the toast of his health when he had not heard one single word of the speech in which it was proposed.

Hughes climbed more or less steadily for forty years. Most of his old climbing friends have also passed away, and it is not easy now to find records of his climbs. But, although he left few



REGINALD HUGHES.

records in writing, the performances mentioned below can be vouched for :

1. He made his first ascent of the Dent Blanche in 1872 ; and his third ascent of the same mountain exactly forty years later, in his seventieth year.

2. Walter Larden, in his little book on ' Climbs round Arolla,' ascribes to him the first ascent of the Aiguilles Rouge ; but it is believed that there had been one previous ascent which had passed unrecorded.

3. It is also believed that he and his guide Franz Andermatten had been the first to climb the little ' Dent de Satarma ' on the road to Arolla in 1881, though he found next year that the first ascent had been ascribed to someone who ascended the Dent later on in the same year.

4. In his sixty-eighth year (1910) he climbed the Aiguille de la Za from the difficult W. side.

In qualifying for membership of the Club the following climbs were credited to him : Dent Blanche from Evolena ; Mont Colon, Monte Rosa, Dom, Aiguille de la Za, Aiguille du Goûter, Grand Combin, Schreckhorn, Eiger, Altels, Wildstrubel, Monte Lucendro, Col de Zinal, Tschingel-Tritt, Col de Chermontane, Col de Collon, Col de Seilon, Riedmattenjoch, and Alphubeljoch.

He also had some experience in rock-work in England, spending holidays on the lakes of Cumberland.

He is a great loss to those who knew him intimately. His genial nature, kindness of heart, fund of anecdote, and retentive memory were a never-failing pleasure to those who enjoyed his acquaintance and companionship.

J. W. A. MICHELL.

GEORGE HERBERT LEIGH MALLORY.

1886-1924.

It was my privilege to know George Mallory from boyhood and to introduce him to the snow mountains he loved and understood so well. Of those whom I have brought into their presence he is the first that they have taken from me. And to me has fallen the honour and the pain of writing this short tribute to his memory. I ask the many devoted friends of his who read these words to forgive me when I fail, as I must fail, to express what is in their hearts and mine.

He was born in 1886, and was brought up at Mobberley in Cheshire, where his father was rector. He became a scholar of Winchester in 1900. Mathematics was his strongest subject at school, and he was a Woolwich candidate in 1904, but he was never bent on a military career, and he went up to Magdalene College,

Cambridge, as an exhibitor in 1905. He read history and took honours in 1907. Magdalene was a very small college which was beginning to come to the front under A. C. Benson, who gave to Mallory and others I have known an amount of help and friendship far in excess of what an undergraduate has a right to expect from his dons. After leaving Cambridge he went to Charterhouse as a master, and remained there till the war claimed him. He served with a battery of heavy artillery on the Western Front. He went back to Charterhouse for a time, but resigned his mastership shortly before the first Everest expedition in 1921.

Mallory was not a notable athlete in the ordinary schoolboy sense of the word. Football was his best ball game, and he played for College Six at Winchester. He was also in the shooting eight that won the Ashburton Shield. At Cambridge he represented his college at rowing and, I believe, at both codes of football. He was a very fine gymnast, not of the heavily muscled type, but of the lither type that depends on balance rather than on strength. His limbs and all his movements were free and full of grace; and he had a strikingly beautiful face. Its shape, its delicately cut features, especially the rather large, heavily lashed, thoughtful eyes, were extraordinarily suggestive of a Botticelli Madonna, even when he had ceased to be a boy—though any suspicion of effeminacy was completely banished by obvious proofs of physical energy and strength. Neither at school nor at the Varsity was his simple, chivalrous nature even temporarily affected by the adulation that knaves and fools are ready to bestow on youths like him. Oxford contemporaries accused him, with some justice, of taking himself seriously. Fortunately for the world, it is a characteristic which a university education often fails to eradicate. It is true he liked to talk on big subjects, and was sometimes in the clouds without much idea of his direction, but he kept as straight up as he could, and by constant intercourse with people of ideas, through books and through new friendships, by determination to enlarge his experience and to profit by it, he became steadily clearer in expression and maturer in judgment, while remaining as idealistic as he was on leaving college. The work he had lately taken up at Cambridge under Dr. Cranage, an endeavour to place some of the benefits of a university education within the reach of poorer working men and women, was just what he had wanted, and it would have had the full benefit of his enthusiasm and his personal charm.

In 1914 he married Miss Ruth Turner. He leaves with her three children, two girls and a boy. It was a delight to enter the home they made at Godalming. Youth, beauty, and vitality had founded it; in it life was simply, happily, earnestly planned, with the spirit of adventure as a favoured counsellor.

It is mainly as a climber that I must speak of him here, and it is as a climber that his name will be known to the world. I think I am right in saying that George Mallory had never seen a mountain



GEORGE HERBERT LEIGH MALLORY

before 1904. I was College Tutor at Winchester then, and I was looking for some young companions whom I might subject to the fascination of the Alps. Harry Gibson had already come under the spell. He and Mallory were rival gymnasts, and both got leave from home to come with me. In Mallory's case it was on the understanding that the instructions of the guide would be implicitly obeyed, and I am pretty sure that he and his parents had different ideas as to who the guide would be. It was some time later that I heard the two had gone to practise on the ruins of Wolvesey Palace opposite college, and that a leap of several yards had just prevented an accident due to the partial collapse of one of the walls. That was the first of a series of unforgettable Alpine seasons with George and other young Wykehamists, the youthful records of which I would not exchange for the rarest treasures in the Club Library. Two expeditions made alone with him in 1904 stand out among many vivid memories. One is an adventurous descent of the Trient glacier in bad weather, an account of which in George's own hand is the first connected account of a climb that he ever wrote; the second is a traverse of Mont Blanc from the Dôme hut to the Grands Mulets, carried through after long imprisonment by storms on a few biscuits and scrapings of honey. From that day it was certain that he had found in snow mountains the perfect medium for the expression of his physical and spiritual being. Mr. Young has written eloquently of his exceptional ease and grace of movement; Nature would indeed have been robbed of a triumph if he had never climbed. His own writings are the most convincing proof of his appreciation of the beauty and the meaning of what he saw.

In 1905 he was at Arolla with Tyndale, Bullock, and myself. The activities of that season are referred to in 'Five Years with Recruits,' a paper published in vol. xxiv. of the JOURNAL. By 1906 he was hauling Cambridge undergraduates without any experience but a wise confidence in his skill up the eastern buttress of Lliwedd. I fancy he made a new and difficult route up a huge slab there to recover a pipe. Mr. Young met him there and saw his capabilities, and in 1909 took him out to the Alps to climb with himself and Donald Robertson. New ascents of the S. ridge of the Unterbächhorn and of the S.E. ridge of the Nesthorn were successfully planned and carried through. In the gloriously fine season of 1911 he was again with Tyndale and myself. He did not therefore share in the most notable triumphs of that year, but we did a difficult route, mostly new, on the Herbetet, the N. ridge of the Grivola, approaching it for the first time over the Col des Clochettes, and Mont Blanc by the eastern buttress of Mont Maudit, a route which I venture to regard as the finest of all except perhaps the Peuteret ridge. It is an astonishing proof of George's modesty as well as of my own persistent assumption of responsibility that he led for only about half an hour on all these climbs together. Five

years later he wrote an account of the Mont Blanc climb which was published in vol. xxxii. It is characteristic of the writer. There is no cynicism in it, he is serious at times with the seriousness of an observant child, he is constantly trying to wring from his re-assembled memories the bearing of the day on his life and ours. That is the reflective George, weighing his thoughts in times of physical inaction. On the mountain-side he was light-hearted enough, taking full toll of laughter from the simple jokes and the trivial incidents that fill the hours of a long ascent. I will only mention one or two of the climbs he made in the Alps in more recent years : in 1912, a bad season, a new ascent of the Dent Blanche by the W. face with Hugh Pope and Harold Porter ; with the latter in 1919 a new ascent of the Aiguille du Midi from Plan des Aiguilles, and a new ascent of the Charmoz from Trélaporte, which he describes in a most interesting paper in vol. xxxiv. of the JOURNAL. Of his climbs in Wales the list is long and the type extremely difficult for all but the most expert. Even in Mr. Geoffrey Young's Easter parties at Pen-y-Pass he stood out as a rock-climber of exceptional powers and perfect balance. No one has ever passed over those terrifying slabs of Lliwedd with more graceful ease. He and Mr. H. V. Reade once took Karl Blodig along the Girdle Traverse, and brought that famous conqueror of peaks over 4000 m. to a state of astonishment that begat fear for the existence of his younger conductor, if not for his own.

The story of the Everest expeditions has been fully told elsewhere. On the first, in 1921, Mr. G. H. Bullock was the only companion Mallory had with several years' experience in the Alps. The leader of the expedition was not a climber, but a very great deal was done to ensure future success. And neither of the two later visits could provide the inexpressible thrill that came to those who first identified the great mountain, then penetrated its recesses and worked round its sides till they finally found the one obviously possible route from the Chang-La.

One feels, as one reads his letters of that time and his chapters on the Reconnaissance, that Everest is revealing itself to a man as fitted to understand its majesty as to accept its challenge. Everest in 1921 is a thing of mystery and romance. In 1922 and still more in 1924 it appears as the familiar, mind-obsessing goal at the end of the two miles of breathless, wind-swept, pitiless, and almost hateful ridge that joins it to the North Col. I believe the abandonment of the enterprise after 1922 would have been no disappointment to Mallory. For him snow mountains were not simply opponents to be overcome ; they were things that feed the springs of reverence and affection, making a man go with a lighter step and a more grateful heart along the road of life. But being asked to go, such a man could not refuse. And his fitness on the third expedition was amazing. His letters, always most critical of his physical condition, are proof of it.

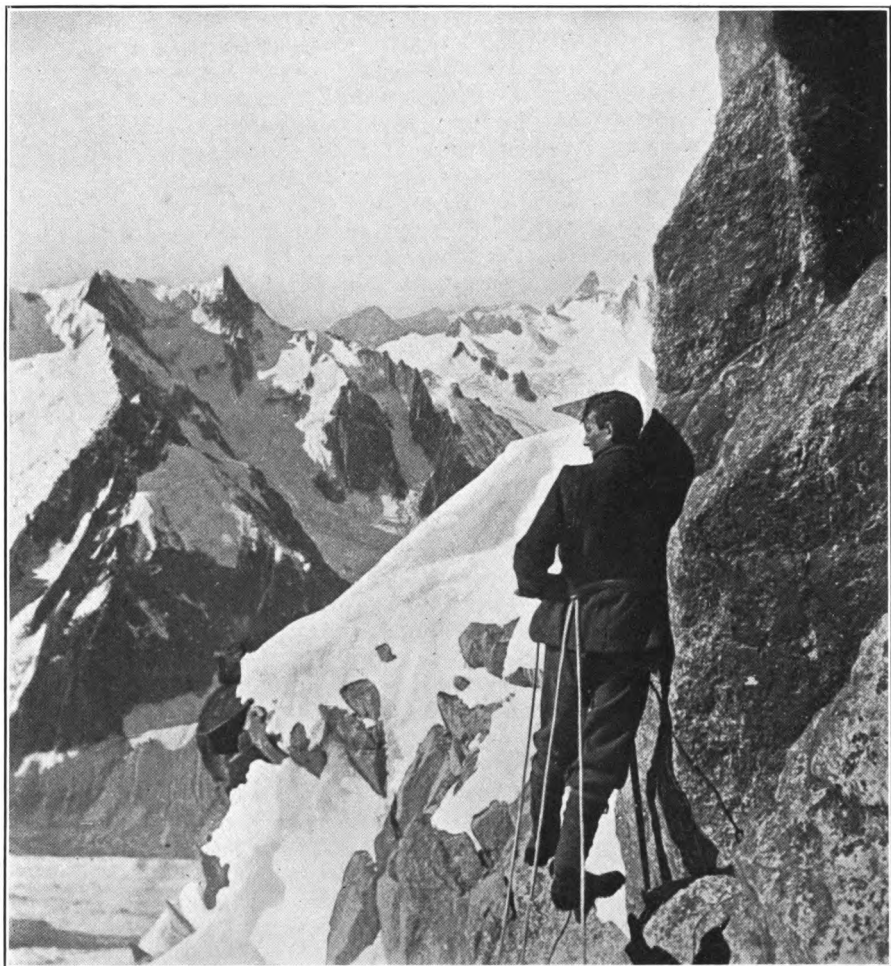


Photo G. W. Young.

MALLORY AT WORK.
(Moine arête of Aig. Verte.)

The story of his last climb is known to every reader of the JOURNAL. Soon after midday on June 8, just below the steep final step of the North Ridge, he was seen with Irvine 'going strong for the top.' That is the last glimpse we have of George Mallory. The height then reached was over 28,200 ft., higher than the record height reached a few days before by Dr. Somervell and Colonel Norton in their splendid effort. The progress of the great climb was being watched through the Press by thousands who never before watched and will never again watch any other climb. And we who knew him saw the same modest, idealistic George obeying the call made upon his physical and spiritual vitality by the sight of any up-soaring ridge and wall of rock or snow, whether in Britain or in the Alps or in the Himalaya. Only, in the Everest expeditions, there was an element of duty, increasing in force with each succeeding attempt, imparting for him a special nobility and sternness to the greatest mountaineering adventure of his life, and involving the promoters of the expedition in a responsibility for loss of life which is unique in the history of mountaineering.

Did he and Irvine reach the summit? It is probable that we shall never know. And what wonderful justice there would be in the decree of Fate that the honour of the first ascent should never be awarded to any but the man who explored the approaches to the mountain and found the only route, who saved his three companions on the return from the magnificent attempt in 1922, and who came back in 1924 to give his life to accomplish what he had set out to do. With better fortune in the matter of weather, with a less cumbersome means of carrying oxygen, Everest may be climbed, shall we say, a second time? How little it matters, after all, whether those last few hundred feet are still untrodden! It was George Mallory himself who wrote of the successful ending of a great climb: 'Have we vanquished an enemy? None but ourselves. Have we gained success? That word means nothing here. . . . To struggle and to understand, never this last without the other; such is the law.' Let us leave him to his rest on Everest, this Galahad of mountaineering, pure of heart, high of purpose. 'To struggle and to understand. . . .' Has he won that goal, seeing now face to face, knowing even as we are known? We may believe it if we cannot prove. This much we know, the manner of his end has touched the hearts of all who value knightly deeds, and has left with us his friends, who cannot welcome him again, an enduring, precious thing. For when we lift our eyes we see that the very shadow which his death has cast so deep across our path intensifies, above as well as behind us, the sunshine of an ever-young and singularly lovable personality.

R. L. G. I.

ANDREW COMYN IRVINE.

1902-1924.

IN August 1919, in company with his wife, the writer was walking over the Carnedd range in North Wales from Bethesda to Conway—one of the very finest walks in the district, and a fitting climax to a climbing holiday. We had just crossed Carnedd Llewelyn and were approaching Foel Grach, when we saw someone approaching with a motor cycle. We were accosted as to whether the summit were Foel Grach, and then the enquirer passed on to Carnedd Llewelyn, leaving us surprised at the youthful appearance of this exceptionally enterprising motorist. This feat could have been accomplished, as it was from Llanfairfechan, by no ordinary schoolboy; it was not till four years later that I knew it was 'Sandy' Irvine, and that he had performed it not merely in the face of extraordinary natural difficulties but against the expressed wishes of his family! He was then at Shrewsbury and was about to become head of his house and Captain of Boats. Not recognising the freak motorist, I next met him at Capel Curig when he drove with a friend and myself to Ogwen prior to a climb on Tryfan.

It sometimes happens when one is endeavouring to select a man for a particular job that the very kind of man one has been seeking turns up. Such was my experience last year when I was trying to make up my sledging party for exploration in Eastern Spitsbergen, under the auspices of the Merton College Arctic Expedition.

It was at Putney that I first actually made the acquaintanceship of Sandy, where he was in training with the Oxford crew just prior to their victorious race with Cambridge. He had already got a cap in 1922. He seemed at once to typify all that I was looking for and all that is so essential in the make-up of one that is to be not merely a useful but also a genial companion under the trying conditions of the Arctic. Adventurer by nature that he was, he jumped at the idea, though I must admit I abundantly emphasised the labour and hardships of sledging, and spoke little of the delights of ski-ing over virgin glaciers, and exploring unknown peaks. He plunged whole-heartedly into preparing himself in every way he could for the expedition. He joined our party at Easter for rock-climbing in North Wales, and in the great gully of Craig-yr-Ysfa distinguished himself by leading the very difficult chimney pitch—a brilliant first lead for a novice. Mechanically-minded as he was he gave valuable assistance in the preparation of our sledging equipment for Spitsbergen.

I shall always look upon that journey of ours across eastern Spitsbergen as one of the most enjoyable expeditions it has been my privilege to take part in. Frazer was my only experienced companion, but Sandy and Geoffrey Milling, his bosom Oxford friend, fitted into the scheme of things so well, that from the



ANDREW COMYN IRVINE.

beginning I felt it would be hard to find more suitable men. Sandy with his powerful physique was, I am sure, chief contributor to our haulage strength. At times under very bad conditions of snow, when the sledges were sticking badly and one's skis were lifting pounds of snow at each step, his output of energy was prodigious. I've never yet been able to discover how on one occasion, when the previous day we had left a sledge weighing little short of 500 lbs. that had been hopelessly bogged and Frazer and I had gone off surveying, Sandy and Milling returned and somehow retrieved it. Sandy admitted to me afterwards that words could never express what they went through in doing it! But it was his practical craftsmanship and skill in all things mechanical that stood us in such good stead on this expedition, as also his sound sense and judgement. I am glad that in the Stubendorff mountains there is a peak that bears his name, a peak that I had the pleasure of making the first ascent of with him after a memorable ski journey of fifteen miles from our camp. The way he shaped on difficult ice on that occasion during our traverse of it, stamped him as one quite able to take part in larger ventures and on greater peaks.

Irvine was selected as a member of the Mount Everest Expedition, 1924, not without some opposition, owing to his age of twenty-one at the time of selection. Though lacking in mountaineering experience it was felt that the natural aptitude he had already shown, together with his undoubted gifts of mechanical and general practical ability, not to speak of temperamental suitability, fitted him for inclusion in the party, before other older men of greater experience in mountain craft. He set to work immediately in an endeavour to make good his deficiency in knowledge of ice and snow craft, and Christmas 1923 found him in the Bernese Oberland learning the finer points of skiing (which he had undertaken for the first time in Spitsbergen the previous summer), preparatory to a period of glacier running and ice experience in the region of the Aletsch Glacier. As Mr. Arnold Lunn has said elsewhere¹ he won the race for the Strang Watkins Cup almost as a beginner, a competition which included some strong and experienced skiers, and he declares he never met a more remarkable beginner than Sandy Irvine. Irvine later told me that he had wanted to do more in the way of high climbing under winter conditions to fit him better for the Himalayas, and it was only the lack of a party that prevented him doing more than he did around the Aletsch Glacier. He appreciated to the full the geniality of Mürren and Wengen, but he wished to be off among the big peaks learning more of the higher mountain craft.

And so Irvine came to the Himalayas with a not inconsiderable amount of experience in mountain travel, backed up by sound common sense, intelligence, and ability to learn quickly, apart

¹ *British Ski Year Book*, 1924.

from his other gifts of physique, endurance and agility. Naturally shy, he was particularly modest and unassuming, and he could not readily be drawn out to say much unless the environment was sympathetic. The high altitudes of Tibet perhaps a little emphasised this. But perhaps his greatest gift was his mechanical genius. He never seemed happier than when up against some severe problem of mechanism; he would revel in finding a solution, and usually found one. His manipulative skill was wonderful. On the Everest Selection Committee I had made a special appeal for him as almost an essential to the expedition largely on the grounds of his mechanical skill, if for no other reason. His work on the oxygen apparatus, which was found to need much repair and reconstruction, was invaluable to me as Oxygen Officer, and without his skill and fertile imagination we might hardly have had a set of apparatus fit for use. His tent invariably became the workshop, and he would work till late at night on the oxygen apparatus or on the repair of primus stoves, or other camp equipment. It was a fitting reward for his zealous work on the oxygen apparatus that Mallory chose him for his companion in his attempt on the summit. Irvine had shown fairly quick acclimatisation after our first arrival at the Base Camp. He was able to carry considerable loads up the E. Rongbuk glacier, and as Norton stated in his *communiqué* some of his times between camps were unbeaten by other members of the party. Although he did such devoted work on the oxygen apparatus, he told me that he would sooner have got to the foot of the final pyramid without oxygen than to the top with it! His view was that if the mountain was worth climbing, it was worth doing without adventitious aids. Many of us go further and consider that general mountaineering in the higher Himalayas is likely to remain in its present halting state unless it can be shown that the greatest altitudes can be reached without the complication and expense of oxygen apparatus as an additional charge on an expedition.

It is hardly necessary for me to repeat what I have written elsewhere about his last climb with Mallory. My final glimpse of one, whose personality was of that charming character that endeared him to all and whose natural gifts seemed to indicate such possibilities of both mind and body, was that he was 'going strong'; sharing with that other fine character who accompanied him such a vision of sublimity that it has been the lot of few mortals to behold; nay, few while beholding have become merged into such a scene of transcendence.

The following are fitting lines to his memory by one of his former masters at Shrewsbury:

‘ Brave heart at peace—youth’s splendour scarce begun,
Far above earth, encompassed by the sky,
Thy joy to mount; the goal was all but won:
God and the stars alone could see thee die.

'Thou and thy comrade scaled the untrodden steep
Where none had ever ventured yet to climb.
Wrapt in heroic dreams lie both asleep
Still struggling upwards past the bounds of time.'
N. E. O.

MAJOR PHILIP B. LINDSELL.

1857-1924.

IF an intense, almost passionate, love of the heights and of mountaineering be an important asset for membership of the Alpine Club, then no one was ever more highly qualified than the old friend who died peacefully in his bed last August.

Philip Lindsell served in the Indian Cavalry for many years. With the 'Multanis' (Bengal Lancers) he went through the arduous Second Afghan War, including the Kandahar march. A severe sunstroke caused him to be invalided out of the Army in the late eighties; in fact, he never entirely recovered his health. From that time onwards he always spent at least six to eight months of the year in the Alps. I am proud to be one of those friends who persuaded him to curtail his enormous walks and take to mountaineering. He was well on in the fifties when he accomplished his first ascent and was elected to the Alpine Club at the age of fifty-six. From 1911 and until the European War he spent at least four months every year in mountaineering. During this period and again after the war, when he resumed his activities, that excellent guide, Alois Biner of Zermatt, rendered him solid and devoted services.

Lindsell, although an extraordinary and terribly fast walker, never attained great skill, and he wisely never attempted really difficult expeditions, but his love of the Alps kept him for ever going, mercilessly to himself perhaps. His last ascents were, I think, accomplished in the Adula district in 1923, and his crowning feat, almost the hope of his latter years, was the ascent of the Weisshorn at the age of sixty-four.

May his brave soul rest in Peace.

E. L. S.

DIEGO CALVET.

AMONG the members of the C.A.F. who attended the congress at Monaco four years ago was a very charming, enthusiastic young mountaineer, Diego Calvet, then about twenty-two years of age. He was a son of the head of the firm of J. Calvet & Co., of Bordeaux, well known in the wine trade. Owing to the English connexions of his firm, young Diego had learned to speak English

well, and reminded me very much of the best type of public schoolboy.

During our visit at Monaco, M. de Cessole was kind enough to include young Calvet and myself in an expedition to the 'gaunt and riven' Aiguille de Pélen (Mr. Coolidge's 'Ball's Western Alps,' p. 23). I shall not soon forget the interesting ascent of that most bizarre of summits—of which M. de Cessole had some time earlier made the first ascent.

Young Calvet used to send me from time to time notes of his ascents, made mostly in the Pyrenees. He visited the M. Blanc group in 1920, doing the Requin, Charmoz, and the traverse of M. Blanc. He was keen to join the A.C., and meant to work hard to qualify. His letters ceased, and I heard casually that he had had an accident; but only in Chamonix the other day did M. Bregeault tell me that two years ago, while motoring to Bayonne to see his fiancée, young Calvet was fatally injured. The loss of this brave, clean, hopeful young life is lamentable.

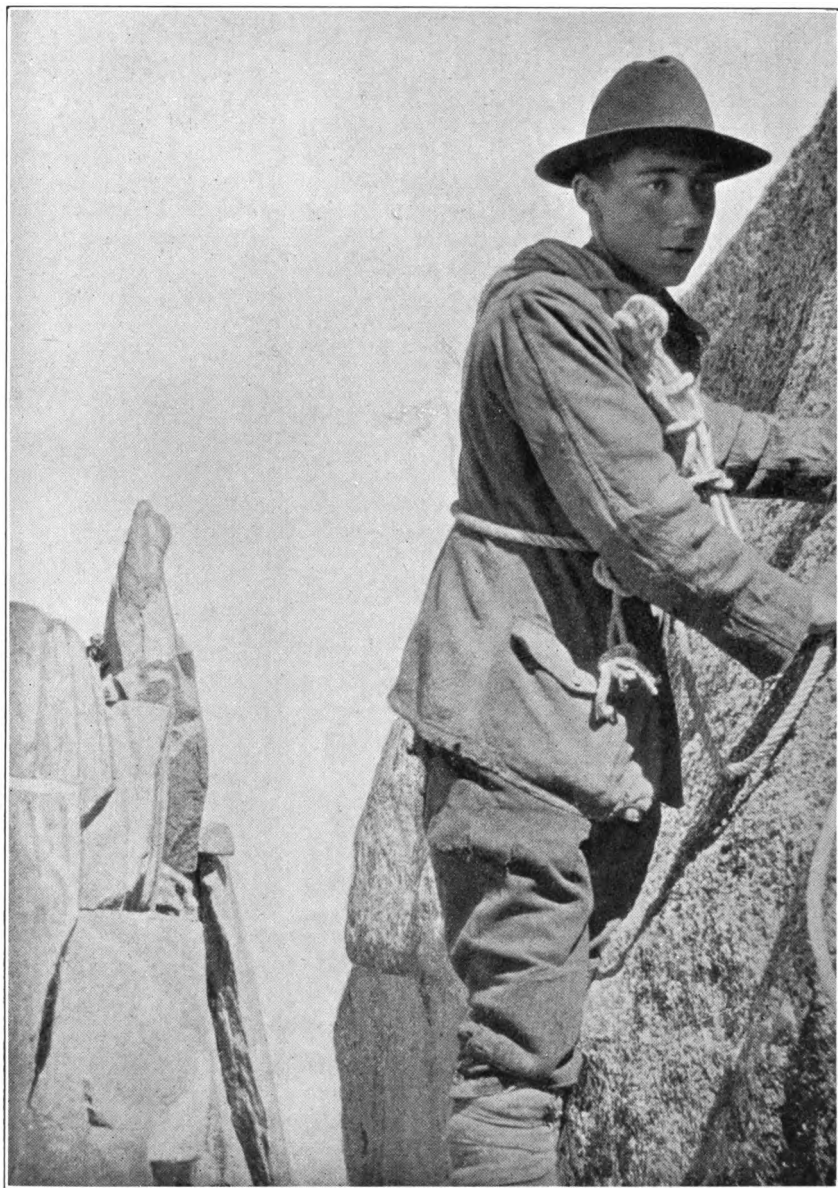
J. P. F.

RUDOLF VON TSCHARNER.
1900–1924.

ONE of the saddest tragedies of the Alps is the fatal accident to the brilliant young President of the Academic Alpine Club of Zurich. To us veterans it recalls the staggering news of the death of Emil Zsigmondy, to whom v. Tscharnner may well be compared.

Born in 1900, eldest son of the old Bernese patrician family of the Château de Gümligen near Berne, he started his mountaineering career at 10 years of age. By the time he was 15 he had developed into a mountain enthusiast that it were hard to match. By 17 he had conquered his first 4000 m. peak. Spring, summer, autumn, winter, he devoted every spare moment to the beloved mountains. Strong, athletic, valiant, as became a scion of one of those old soldier families that, in the past, have supplied warriors to the armies of Europe,¹ and whose names are still on our own Army List, he pitted himself, justifiably, against the most difficult mountain problems. In him experience had grown out of long assiduous practice—perfect bodily fitness out of steady persistence in

¹ In the time of Louis XIV there were eleven Swiss regiments besides the Gardes Suisses and the Cent Suisses of the king in the French service. A Zurlauben commanded the French cavalry at Blenheim.



RUDOLF v. TSCHARNER.

hard exercise and rigid avoidance of luxury and indulgence. Learning the craft under guides, he developed into one of the foremost of guideless climbers able to play his full part, whether as leader or supporter. He was not merely a rock gymnast—a ‘Kraxler’—and after all the best ‘Kraxler’ I have ever seen is a Cape baboon—but had by study and intensive work built himself up into an all-round mountaineer. A classified list, in his own handwriting, of all his expeditions lies before me. It is evidently a labour of love and pride, and he may well have gloried in such a proof of endeavour. It numbers over 160, and includes expeditions in Eastern Switzerland, the Oberland, the Valais and Chamonix—details will be found in the annual reports of his Club—but the following may be noted :

Zermatt district : Rothorn, Gabelhorn (trav.), Weisshorn (trav.), Dent d'Hérens, Dent Blanche (Viereselsgrat), Lyskamm, Dom, Täschhorn (Teufelsgrat) and other summits of the Mischabel, Dufoursp. and other points of Monte Rosa, Matterhorn (Z'Mutt).

Oberland : Wetterhorn, Schreck-Lauteraarhorn, Finsteraarhorn, Aletschhorn, Bietschhorn (a desperate winter ascent with Mr. Lauper).

Chamonix : Aig. Verte, Les Droites (variation), Aig. du Géant, Chardonnet (trav.), Grépon.

Grisons : Bernina, Piz Roseg (N. face direct from Tschierva glacier).

He knew thoroughly, of course, the mountains within the near radius of Zurich, and had travelled in Corsica. One of the greatest exhibitions of determination, of resistance to fatigue and cold was the ascent *in winter* of the long W. arête—piled up with snow—of the Bietschhorn carried out with Mr. H. Lauper, member of the sister University, well known to his associates as the ‘intellectual’ mountaineer, the one who ‘climbs with his head.’

He was a finished Skieur, and made this year the first traverse of the Mt. Blanc range. I print below his own account, which he sent to me shortly before his death, when he also expressed his concern at the Everest tragedy and his earnest hope that the undertaking would be pursued to final victory. He was keen to be allowed to take a part.

He was one of my most enthusiastic young correspondents, highly interested in the Mt. Everest expedition and mountain subjects generally. He had just joined for his year's training and had been gazetted Lieutenant in the artillery stationed

at the Gotthard. On July 14 he set out to make the ascent of the Finsteraarhorn by the well-known S.E. arête—an expedition well within his powers. The approach from the Oberaar hut is up a steep ice-face seamed by an ill-defined rock arête (v. 'A.J.' xxvii. 'The first ascent of the Finsteraarhorn' with sketch of route). High up on this arête a rock came away with him, and although his companion Wüthrich instantly jumped to the other side of the arête the rope cut on the sharp edge, and v. Tschärner fell a thousand feet to his death.²

To even a better man—Auguste Blanc on the Dolent—came the identical fate. It is the old lesson, never too often preached, never wholly learnt, that care, constant care—and I use the word in a much wider sense than merely indicating attention to one's foothold and handhold—is the great rule. What undoubtedly sets the craft of mountaineering in a class by itself is that the penalty of an instant's carelessness, of a momentary want of judgment, is quite often death. Its merits in building up not only physique, but determination, and indeed the whole character, are great, but to glorify death on a mountain strikes a false note. Risks, of course, there always are; they must be taken. The game is not worth the candle without. But the master's job—his proof of worth—is to come through.

And in the keen regret at the cutting off of brave young lives like this there will not fail to mingle a warm-hearted admiration for the fallen and an unquenchable pride in the gallant, unconquerable spirit that animated them.

J. P. FARRAR.

FIRST WINTER AND SKI TRAVERSE OF THE MONT BLANC FROM COURMAYEUR TO CHAMONIX. APRIL 17–21, 1924.

H. Wieland, A.C.C., München, R. v. Tschärner, A.A.C.Z.

On April 16 we crossed the Col Ferret from Orsières to Courmayeur. Snow and weather being extremely bad we only reached Courmayeur at 23 p.m. Next day we went up

² Mr. Amstutz of the A.A.C., Berne, told me that v. Tschärner was trying a *new route* on this face, but he knew no details. It is possible that he may have been attempting the arête which runs from the summit of the Studerjoch to that of the Finsteraarhorn. This has never been done—I think not even tried. It deserves looking at. See illustration, *A.J.* xxvii. opp. p. 295.

to the Cantine de Vissaille, where we remained the night. The weather had cleared, but a terrible storm raged on the summits above. We left the cantine on Good Friday at 4 A.M. and followed the glacier de Miage to the Dôme hut. 13 P.M. It was difficult to find the hut, snow totally covering it on the west side. Departure Saturday morning 1.30, crossed and ascended the Dôme Glacier to the Aig. *Grises ridge. A frightful storm obliged us to return immediately; at midday we were back in the Dôme hut. On Easter morning, 0.30, we left the hut again, reaching the Aig. Grises near the Col de Bionnassay at 4 o'clock. We had to carry the skis from here to the Col du Dôme. The storm raged and we had great difficulty to get on. There was no use for the cord. The ridge was covered with ice; we had to be very careful because the wind got hold of the skis. On the Col du Dôme we had to take them off, and climbed up to the Vallot hut which was full of ice. 8 A.M. At 10.30 we reached the summit of Mt. Blanc, but it was impossible to remain there for the storm raged in all its fury. We raced down to a place sheltered from the storm. Below the Col du Dôme we put on the skis and raced down to the Grd. Mulets. It was the most beautiful run, and at 16.00 we reached the Jonction where we roped for the first time. We tried to descend by the Montagne de la Côte, but failed, so we had to bivouac. Next day we descended by the Pierre Pointue and reached Chamonix at midday.

NEW EXPEDITIONS.

Mont Blanc Group.

GRANDES JORASSES (4205 m. = 13,797 ft.), BY THE S. ARÊTE AND THE TRONCHEY FACE. July 23-24, 1923. MM. F. Ravelli and G. Rivetti, with E. Croux.—The party left the Tronchey chalets early on the 23rd, and gained up steep grass slopes the great rocky spur which separates the glaciers Pra Sec and de Tronchey. This was followed to the summit of the most southerly of the three aiguilles, well visible and still unclimbed, which crown the above rocky spur just at the point where it loses itself in the great face at about 3600 m. They suggest the name Aiguilles de Pra Sec. From the summit of the S. Aiguille they descended to the col between it and the Central Aiguille, turned the latter on the W. side, and so gained the W. face of the N. Aiguille. They climbed with much difficulty

about 30 m. up this face and bivouacked on a little platform at about 3600 m. Leaving next morning at 4, they gained the crest of the arête not far from the summit of the N. Aiguille. A short descent led to the next gap whence they bore slightly to the right—east—up the face above the great drop commanding the Tronchey glacier. They then ascended a first steep couloir until pulled up by impracticable escarpments. They then ascended to the right by other couloirs and by ice slopes, cutting many steps. Climbing some rock ribs covered with ice they finally gained the great couloir which descends directly from the Pointe Walker. They made the very steep and exposed ascent by the right bank of this couloir (rocks mixed with ice) and so gained the summit at 14.30. The descent was made by the ordinary way, but by reason of the dense clouds surrounding them, they only reached the hut next morning after a further bivouac at 4000 m. accompanied by much snow.

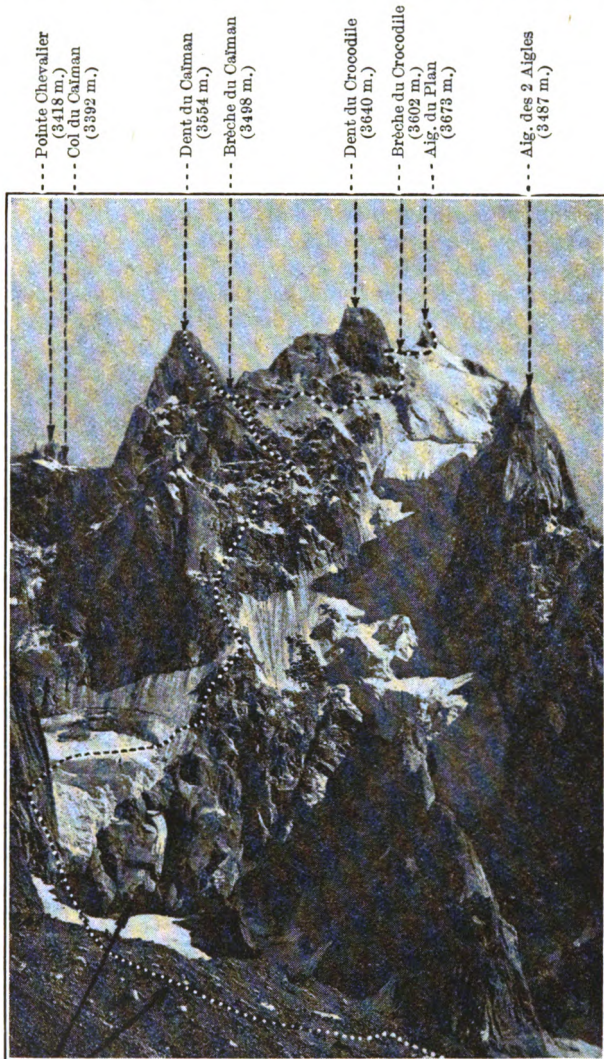
This climb offers difficulties all the way, and on certain points is not safe from falling stones.—*Rivista Mensile*, 1923, p. 265.

AIG. DU PLAN (3673 m. = 12,051 ft.) by the N. face. August 11-12, 1924. MM. Jacques Lagarde, Jacques de Lépiney, and Henry de Ségogne. The party left Plan de l'Aiguille at 3 A.M. and gained the Blaitière glacier. They ascended then by the rocks which form the base of the Aig. de Blaitière so as to attain the forehead of the hanging glacier. They then put on crampons, and, after climbing rather difficult chimneys between ice and rock, reached the little plateau of névé immediately below the Col de Blaitière. They then traversed to the right on a fairly steep ice-slope to gain the ill-defined arête which separates the glaciers of Blaitière and du Plan. They climbed the convenient rocks of this arête to its end—that is to say, to the base of the great iced wall dominated by the Caïman. This wall offered generally serious difficulties, the rocks carrying much snow, and frequently they were covered with ice, necessitating long work with the axe. The first bit was one of the hardest; the leader, J. de Lépiney, after having vainly tried to force an iced chimney, found more to the right a chimney in dry rock, very smooth, facing the Aig. des 2 Aigles, which opened the way for the party. A short slope of ice, extremely steep, followed, and easier ground then led to the foot of the great triangular wall, fissured and splashed with yellow, so visible from Chamonix. Rounding this wall by the right the party gained at last the Brèche du Caïman (3498 m. Vallot) between the Crocodile and the Caïman.

5 P.M. The place and weather conditions were considered proper for a bivouac.

An attempt was made to climb the Caïman. This proved very difficult, and could only succeed with the aid of the rope, or at least the axe. As they had not brought this, they did not attain their objective, and at 8 P.M. were back again in the Brèche.

The bivouac was comfortable, but at 11 P.M. the appearance of dark clouds and lightning made a start advisable (midnight). The



This moraine and these rocks hide the lower part of the Blaitière glacier, which is behind. The Glacier du Plan is the one on the face of the Plan.

Cliché Charnaux frères et Cie., phot., Genève.

AIGUILLE DU PLAN (N. FACE).

summit of the Plan was gained by taking again to the N. face and traversing very low down below the Crocodile. This part of the

expedition was by much the most serious, and exceptionally delicate in complete darkness.

The way led across extremely steep ice-slopes. It was only at the commencement that a covering of good snow was found. The absence of one axe forced Henry de Ségogne to anchor himself in the ice with his knife. Crampons were of the greatest service. At 5 A.M. on August 12 the summit of the Plan was gained actually before the storm broke.

The descent was made by the ordinary way, and Montanvert reached at 10.30 A.M.

(Description by J. de Lépiney and H. de Ségogne.)

[M. de Lépiney has been good enough to mark the route on the photograph attached. He remarks that this view is taken from very low down, and accordingly makes the terrain from the Brèche du Caïman to below the Crocodile look flat, whereas in effect it ascends at an angle of 25° to 30°. He tells me that M. le Dr. Migot, who has studied the question, thinks that Baumann ('A.J.' x. 443 *seq.*) reached the main arête not far from the Brèche du Caïman. Baumann's admirable paper would have been much clearer had it been accompanied by a marked picture. This is promised in the new Vallot guide on the point of appearing.

Our splendid young French comrades are to be warmly congratulated on completing this technically very difficult ascent. For us it has the further interest of recalling once more a most stirring paper in 'A.J.' xvi. 422 *seq.*, 'Two Days on an Ice-Slope,' wherein Ellis Carr described the adventures in 1892 of Mummery, Slingsby, and himself in an attempt on the face which has now—thirty-two years later—succumbed. Mr Carr's paper is so well illustrated that one can follow the route minutely. His pictures should be compared with those now given. It would appear that in Baumann's time (1880) 'the smooth glacier-worn rocks which form the base of the Plan' ('A.J.' x. 445) were as they are nowadays, whereas by 1892 they were all under ice and gave the party of that year very much trouble. These rocks appeared to Baumann impossible, and his view is shared by M. de Lépiney, hence they have to be turned.

Mr. Ellis Carr was naturally much interested in the present expedition, and writes:

'I have carefully studied M. de Lépiney's account of his ascent of the N. face of the mountain and must heartily congratulate him and the other members of his party on their success in carrying out what I feel sure must always be a difficult and trying expedition. What first strikes me, on comparing the conditions as shown on the photo with those prevailing at the time of our attempt so many years ago, is the remarkable diminution in the amount of ice on the mountain generally, and especially on the lower part of the face. The ice couloir, which cost us so much work with the axe, seems to have disappeared entirely, leaving a bare face of precipitous

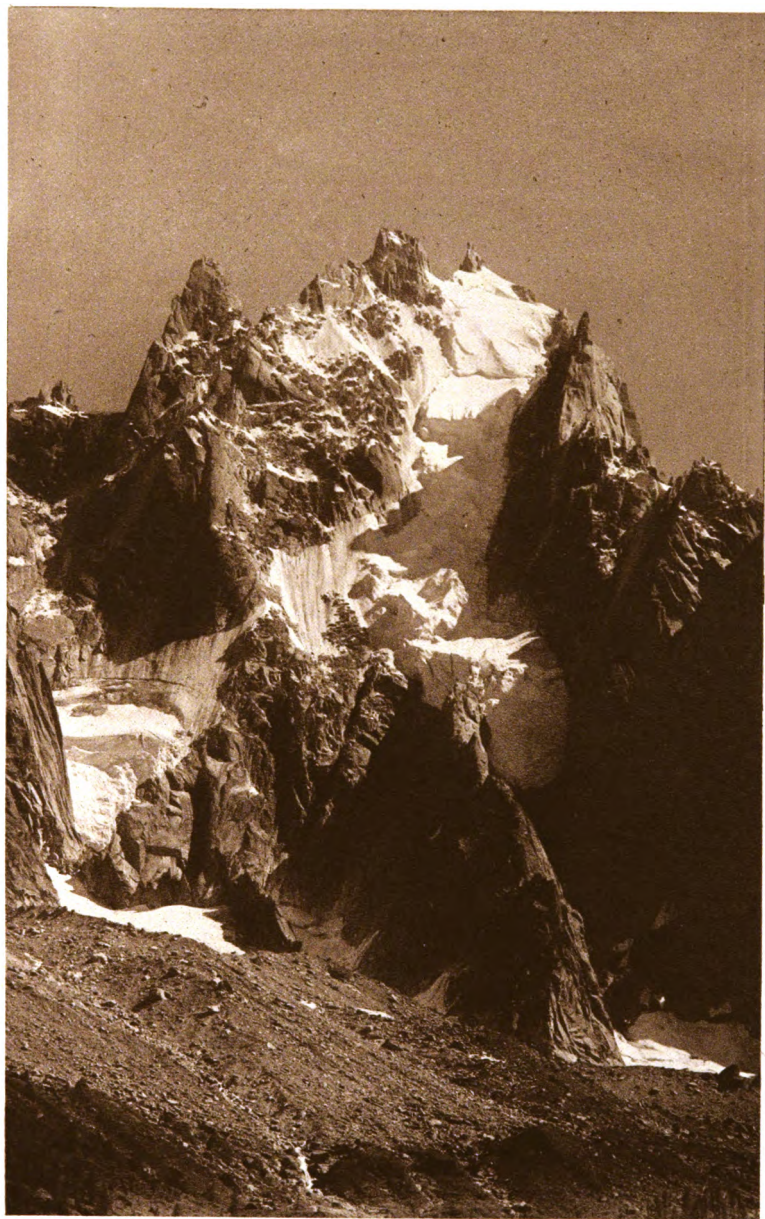


Photo: Charnaux frères, Geneva

L'AIGUILLE DU PLAN

North face. From Les Praz near Chamonix.

rock which may well be found to be quite unclimbable, and I think it is likely that on future occasions there may be found no way of gaining access to the face but by the Blaitière rocks, a route rejected by us owing to the then palpably dangerous state of the snow.'

The present expedition will rank as a masterpiece of planning and execution, and it is a satisfaction that it, like the attempt of 1892, has been carried out by an eminently qualified guideless party.

J. P. F.]

AIGUILLE VERTE BY THE N.E. FACE (4127 m. = 13,541 ft.). August 6-7, 1924. MM. Tom de Lépiney, Jacques Lagarde, and Henry de Ségogne.

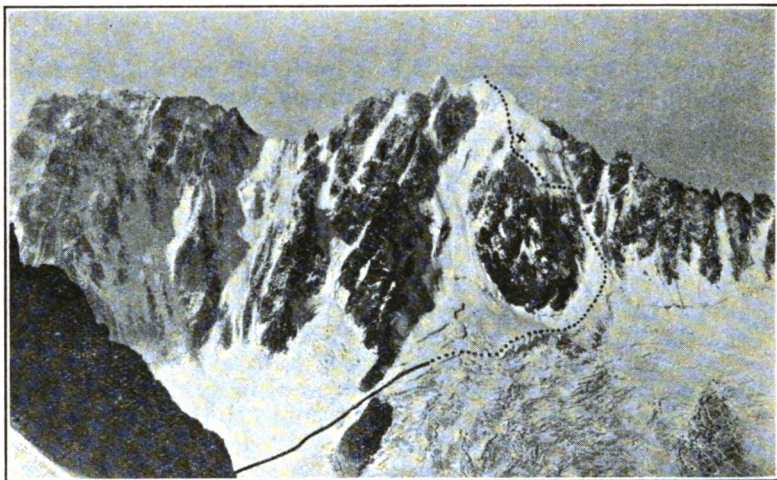
After waiting several days in the new Jardin d'Argentière hut, in consequence of very uncertain and even bad weather, the party left at 23.05 on August 6 and (30 m. halt en route) crossed at 1.50 on August 7 the easy rimaye of the great couloir by which on July 31, 1876, MM. Cordier, Maund, and Middlemore, with the guides Hans Jaun, Jakob Anderegg, and Andreas Maurer, made the ascent. 'Despite the early hour stones fell from time to time quite close on our right. Accordingly we judged it advisable to quit the couloir where it narrows considerably (about 3.15) and to climb the rocks covered with verglas and snow, exceedingly difficult, of its right proper bank. It was not until 6.30 to 7.00 that we managed to arrive under the barrier of séracs, which fortunately were not continuous. We thereupon carried out a great traverse on snow and occasionally ice, somewhat exposed to ice and particularly stone-fall. The snow arête which forms the upper prolongation of the great rock buttress of the Argentière face was gained at 8.35, after overcoming a steep ice-wall. Shortly after we stopped (9 to 9.35) at X. for lunch, no suitable place having been passed since leaving the rimaye. The summit of the Verte was reached at 11.25 and the Couvercle not until 22.00. The extraordinary amount of snow on the Moine arête forced us to descend by a secondary couloir into the main couloir of the W. face. A violent thunderstorm broke over us at about 3900 m. and did not cease until long after our reaching the hut.'

M. de Lépiney remarks that crampons were found of great service, and that had the conditions permitted of their adhering with reasonable safety to the couloir itself (as was their original intention), and not compelled them to take, as stated, to the difficult rocks of its right back, they would have saved upwards of 3 hours.

[This great expedition, upon which these valiant young mountaineers of the Groupe Haute Montagne are to be warmly congratulated lies to the left of the Cordier-Maund-Middlemore route referred to above. Mr. Maund's topography ('A.J.' viii. 289 seq.) is not at all clear in the absence of any diagram. The diagram in the 'Ö.A.C. Guide' is too sketchy to convey any very reliable information; that in 'Kurz' Guide' gives rather more detail

and may be accepted as an approximation to the 1876 route. Lord Wentworth's party, some time after 1876, attempted to ascend this face. They only succeeded in retracing their steps with great difficulty and after an impromptu bivouac (*ibid.* 294).

The great rock arête on the left, at the foot of which is a rock island in the glacier, is that attempted by Capt. Farrar, led by Daniel



This Photograph was taken 2 days after their ascent.

Maquignaz in 1898 ('A.J.' xxxiii. 383), and again by Mr. Odell's party in 1920 (*ibid.* 382, with photograph). It will afford some work.

The Fynn-Goudet route of 1895 is again more to the left ('Ö.A.C. Guide,' par. 499), and has never been repeated.]

POINT (3572 m. = 11,716 ft., Vallot) BETWEEN THE TOUR NOIRE AND THE AIG. ROUGES DU DOLENT OPPOSITE LA MOUCHE. August 1924. MM. Tom de Lépiney, Pierre Dalloz, Jacques Lagarde, and Henry de Ségogne.—This ascent was made from the Brèche 3509 (Vallot).

Pennines.

AIG. DE CRÊTE SÈCHE (2807 m. = 9207 ft.) (*vide* 'Guide des Alpes Valaisannes,' vol. i. pp. 174 and 177). August 23, 1924. Rev. C. G. Monro and Miss Monro, with Pierre Blanc and his son Alphonse.

From the comfortable inn at Oyace the party gained, *viâ* the Combe de Faudery, the Col Duc, whence the N. arête was mainly followed, a remarkable rock-tower just above the col being circumvented. Rocks in places loose; climb generally interesting.

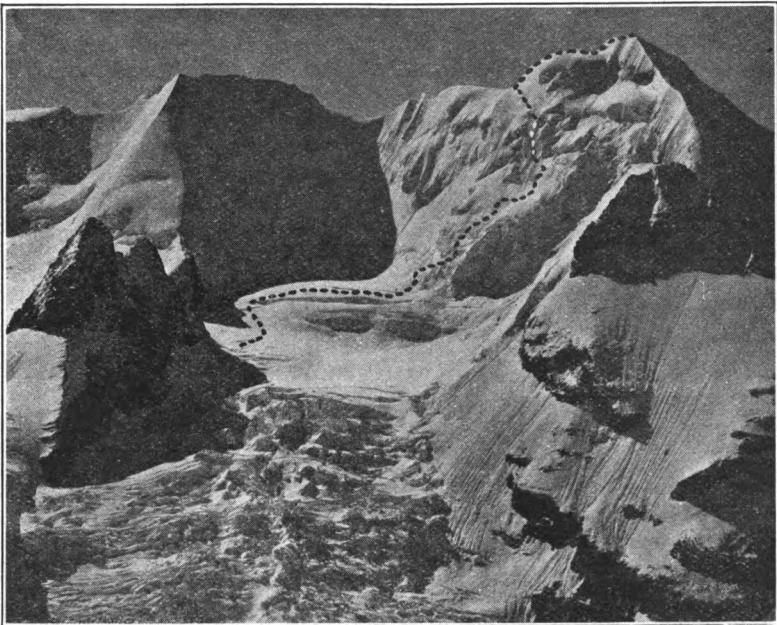
Time from col about 1 hour. The descent was effected by grassy gullies and ridges on the S. face, and, bearing steadily to their right, the party regained their sacks in the Combe de Faudery without touching the Col du Freiti.

WEISSMIES (4031 m. = 13,226 ft.), BY THE BUTTRESS BOUNDING ON THE E. 'THÄLLI' (SIEGFRIED). September 6, 1924, Squadron-Leader E. B. Beauman, with Othmar Supersaxo. The foot of this buttress is a bit to the left of 2758 (Siegfried). The buttress joins the Trifthorn-Weissmies arête at about 3780 m., and does not seem to have been previously ascended. Beyond this junction the route is not new ('Guide des Alpes Valaisannes,' iii. 337). The climb is described 'as a good three hours' pleasant rock scrambling in the middle of most delightful views.'

Times.—Almagellalp inn to foot of arête, 2 hrs.; to junction of Trifthorn-Weissmies arête, 3½ hours; to summit of Weissmies, 1½ hours.

Bernese Oberland.

BLÜMLISALPHORN (3671 m. = 12,044 ft.) BY THE N. FACE. June 1, 1924. H. Salvisberg, W. Amstutz, and W. Richardet, A.A.C. Berne.



Taken from Dündenhorn.

[Photo, E. Gyger.

'Left Hohtürli hut 4 A.M. Followed the regular route to the glacier bay between Weisse Frau and Blümlisalphorn. The N. face was attacked at the spot where its séracs project the furthest into this glacier bay. (About in the straight line with the summit of Blümlisalphorn.) 6 A.M. Cutting up icefalls, steep ice- and névé slopes, we reached at 9.20 the N.E. arête and followed it to the summit, 10.35. The arête to the Weisse Frau was then followed, whence the descent to the Hohtürli hut was made. Magnificent ice expedition.'

W. RICHARDET, A.A.C.B.

LAUTERBRUNNEN BREITHORN (3779 m. = 12,399 ft.) BY THE N. FACE. August 12, 1924. Dr. D. Chervet and W. Richardet, A.A.C. Berne.

'We left the Obersteinberg inn at 1 A.M. and followed the Breithornjoch route (Dübi II. 49) *via* the Oberhornsee and the Breithorn glacier to near Pt. 2316. Up the W. branch of this glacier we gained the striking gap S. of the "Wermuthorn," local name for the well-marked rock-summit S. of Pt. 2316. From the gap we followed the rock arête until it ends in the "Ober Schmadri glacier" (small Stoneman). We now left the Breithornjoch route and followed the last-named glacier in a S.W. direction to the foot of the N. face of Breithorn (7 A.M.). We were now pretty exactly in the straight line (*Germ.* Fallinie) with the E. summit. We crossed the Bergschrund and cut up a steep ice slope to the right to a striking triangular rock-patch [marked 1 in photo], 8.30. Now began the climbing up the very steep face. We kept always to the right (E) flank of a rib which descends from the E. summit, and of which only the upper third becomes well defined. By midday we had, with difficult work, overcome the "Great Precipice" (*Germ.* Grosser Abbruch), a steep iced step with tile-like stratification. It was only now possible to follow the well-defined rib which, up steep rocks and ice, led direct to the E. summit, 14.10. Descent by the W. arête to the Mutthorn hut.

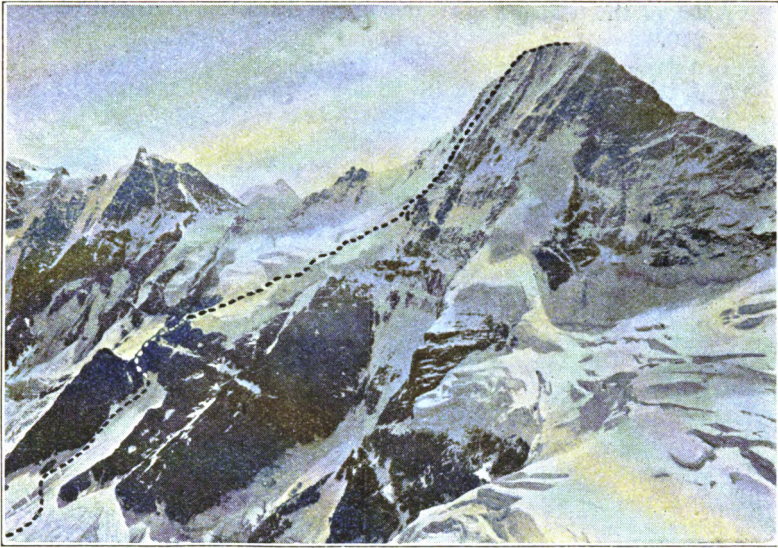
'Total time, Obersteinberg to summit, 13h. 10m., including 1½ hr. halts.'

W. RICHARDET, A.A.C.B.

The rock is described as good.

[This magnificent climb up a face that hitherto has been recognized as offering great difficulties, is a great testimony to the powers and skill of the two young Swiss University mountaineers. MM. Hans Lauper and P. von Schuhmacher on August 19, 1923, were driven back by bad weather at the foot of the face. With the other two ascents reported in the present JOURNAL, the new ascents from the Rottal appear to be exhausted.

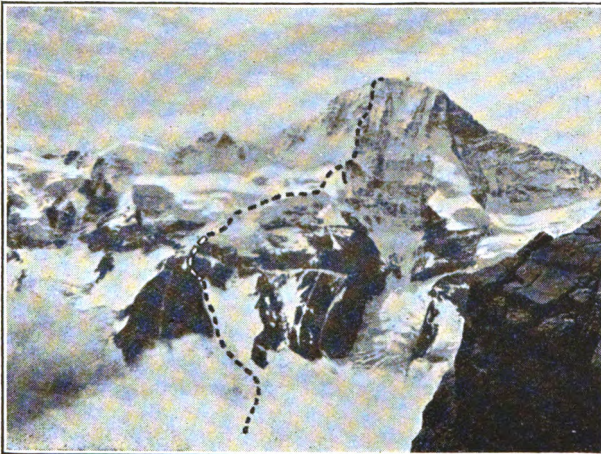
Reference should be made to my 'The Roththal face of the Jungfrau,' with a marked plate in 'A.J.' xxxi. 210-217.



[Photo, Dr. O. A. Hug.]

Taken from the Lauterbrunnen Breithorn.

This Photograph shows clearly the approach.



[Photo, Dr. O. A. Hug.]

Taken from the Tschingelgrat.

This Photograph shows the face better and the line followed on the critical upper part.

A list of the passages made out of the Rottal is given in 'A.J.' xxx. 246.

To these must now be added :

- 3A. Ascent of Ebnefluh by N. arête. See present JOURNAL.
- 4A. The Roteflüh arête. See 'A.J.' xxxv. 286.
- 7A. Grossjoch. See present JOURNAL.
- 7B. Ascent of Grosshorn. See 'A.J.' xxxiv. 168.
- 9A. Ascent of Breithorn. See present JOURNAL.

J. P. F.]

EBNEFLUH (3964 m. = 13,006 ft.), BY THE N. ARÊTE.¹ July 16, 1924. Miss F. R. Wills, with P. Almer (father and son); Capt. J. P. Farrar, with Fritz Boss.

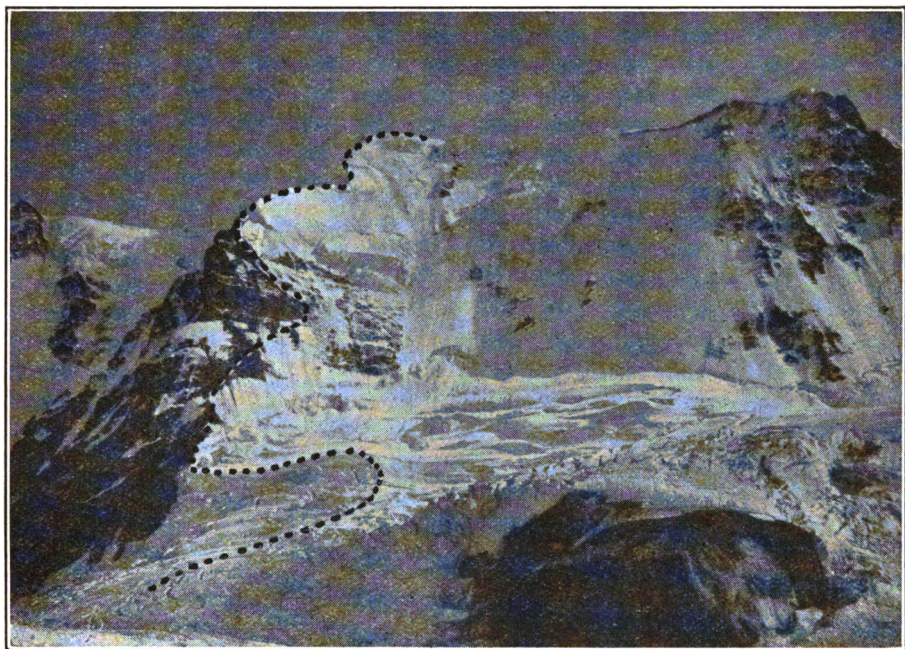
We left the Rottal hut at 4 A.M., crossed the glacier and ascended the ice-slope as shown on sketch. We then took to the rocks which, though steep and loose—foothold only—were not particularly difficult. We traversed to the right across some iced couloirs so as to gain the right-hand end of the steep rock wall. We were at the top of the rocks which formed a convenient headland at the foot of the upper ice portion of the ascent by 7.30, and spent $\frac{3}{4}$ hr. in eating and idleness—the weather looking all right. There followed a steep ice arête and then a broader ice ridge—very steep indeed for a bit—much step-cutting. We then reached easier slopes and bore to the left to gain the final outcrop of rocks beyond which was the snow summit, 11.5.

I was under the impression there was an easy way to the Jungfrau-joch. Peter père did not demur, so we descended to the broad opening of O. K. Williamson's Gletscherjoch—then ascended a great snow dome—traversed the whole ridge of the Gletscherhorn²—by no means easy—to its summit, 3.50. On the way down we got into a tremendous thunderstorm—as vivid lightning as I have seen, with a deluge of hail that, in addition, showered down on us from the slopes above in small avalanches—just when we were on

¹ I am quite at a loss to explain why this very obvious route—the first *direct* ascent of the mountain from the Rottal—had not been made before. I noted it from the Rottal hut in 1923 and could hardly believe it was new. I learn since that it had not escaped the eagle eyes of the young University climbers in Berne, and had Mr. Lauper not been absent in California it would no doubt have fallen to him, which would have been more correct than to my strongly guided party.

² Siegfried does not show the arête correctly. The precipice on the Rottal side is stupendous and there are several huge towers all traversed except the last which we turned by descending a short way in a couloir on the right.

a long ice traverse. Two minor storms followed and the mist was so thick that it took all old Peter's skill, aided by a momentary lift



NORTH FACE OF EBNEFLUH.

in the clouds, to extricate us. We reached the inn on the Jungfrauoch at 10 P.M.!

J. P. F.

GROSSJOCH¹ (ca. 3700 m. = 12,146 ft.). August 11, 1924. Miss F. R. Wills and Capt. J. P. Farrar with Peter Almer père et fils. We left the Obersteinberg upper inn at 4.2 A.M. and reached the grass plot described 'A.J.' xxxv. 254. Breakfast, 6.30-7. Young Almer then cut up steep icy slopes to a first bergschrund (there are *two* below the one visible in picture), which we crossed on the left under two huge and somewhat threatening séracs. We turned sharp right and hurried across, to get out of range, to a second easy bergschrund. Crossing this, Almer cut straight up very steep, hard snow to the lip of the big bergschrund visible in picture. We bore away, under the lip, horizontally to the left, to gain good steep rocks which

¹ This name is subject to the approval of the Topog. Bureau, Berne.

form an island. This appeared the first place where access to the rocks can be gained. Our hope had been to take to them much earlier so as to avoid crossing under the big séracs. The splendid weather beguiled us into spending from 10.15 to 11.20 eating and idling. We followed the island to its head and then cut across a snow-slope to the main rock massif (11.45). Good stepped rocks, mainly gneiss, were then ascended at a good rate with the great ice-slope—prodigiously steep²—close on our right. The rocks got steeper as we progressed but, while needing great care, were at no point very difficult, nor were we at any time in danger from ice or stones. Arrived at the end of the rocks young Almer had quite an hour's work cutting in hardish ice before we reached the main arête at 3.30. We left at 4, descended very steep snow-slopes and snow gullies to the Anenfirn, passed close to our Jägilücke of last year, and hit the path 'in der Anen,' making Fafleralp at 9.5 soon after dark. Weather perfect all day.

The two Almers carried out our plans with an energy and a mastery of their profession that deserve every recognition. They complement each other admirably.

Our intention had been to cross the Mittagjoch, and our massif appeared to lead to the lowest point in the ridge somewhere about where we imagined the Mittagjoch to be.

Mr. Irving's party (August 3, 1908, 'A.J.' xxiv. 360-1) ascended the Mittaghorn from the Rottal by what I take to be the massif of rock to the left of our massif. Towards the top they bore to the right and reached the main watershed arête to the S.W. of the Mittaghorn, which they gained in 1 hour by following its S.W. arête. Dr. Dübi ('S.A.C.J.' xlv. 327) remarks that his own 1880 route from this side to the Mittagjoch coincided with Mr. Irving's to a certain point, but bore towards the end more to the right. Dr. Dübi's Mittagjoch would appear to be at A in the picture. A little later Mr. Irving (August 24, 1908, 'A.J.' *ibid.*) descended the N.E. arête of Grosshorn 'to a snow-saddle, this being considerably the lowest depression between the Mittaghorn and the Grosshorn,' whence they descended to the Anenfirn. He adds: 'It would have been shorter to have continued on the ridge over a small gendarme to the Mittagjoch of the Siegfried map.' This would appear to be at B in the picture (there are two gendarmes—not one—and they are not very small). This is practically our Col, but it is not Dr. Dübi's.

The terrain on the Rottal side of the range, from the Breithorn to the Ebnefluh, does not appear to me to be accurately delineated in the Siegfried map, or to agree with the photographs, and personally I do not know at what point the Siegfried map actually places the Mittagjoch. The côte 3704, presumably intended for

² Up this led Macdonald's ascent of 1895 and Hasler's of 1904, the leader in each case being Christian Jossi.

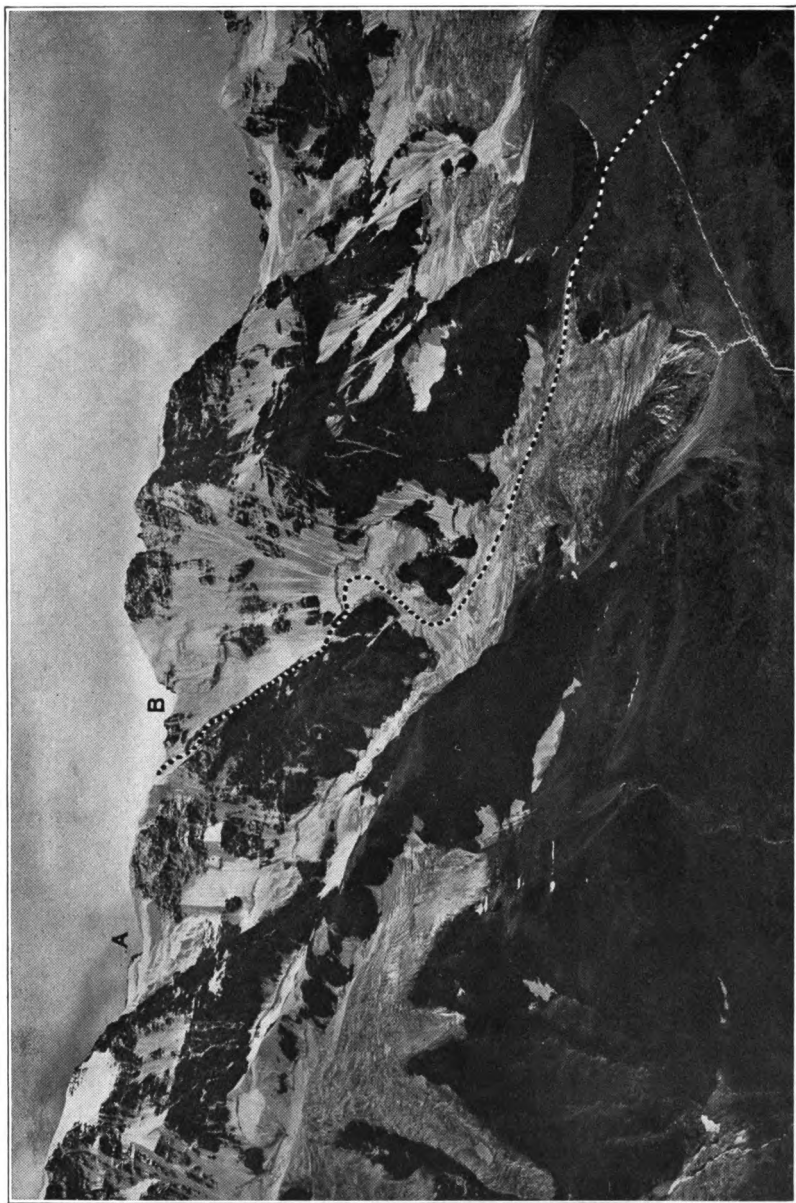


Photo: Wehrli A.G.

MITTAGHORN,

GROSSJOCH,

GROSSHORN,
from Obersteinberg.

SCHMADRJOCH.

A—MITTAGJOCH.

B—MR. IRVING'S COL (not crossed).

the Joch, is some distance away from the name, and approximates more nearly to our Col.

We seem thus to have made a new route across the range to which the name of Grossjoch might be given.

My friend Graham Irving has read my interpretation of his route and confirms my conclusion.

J. P. F.

THE SOUTHERN ALPS OF NEW ZEALAND.¹

Two Thumb Range.

MT. ALMA (8204 ft.).—First ascent, H. C. Chambers, H. E. L. Porter, C. S. Barker. Up the Rangitata valley to the musterers' hut at the foot of Black Mountain. Thence up Alma creek, turning the impasse by climbing over the bluff on the true right, and taking the left branch, where the creek forks above, to a bivouac in the highest patch of trees (3 hours). From here easily up bed of creek to a snowfield well short and to right of col at foot of S. ridge. Up this snowfield diagonally, and by easy rock-ribs and snow to the top ($4\frac{1}{2}$ hours). December 18, 1923.

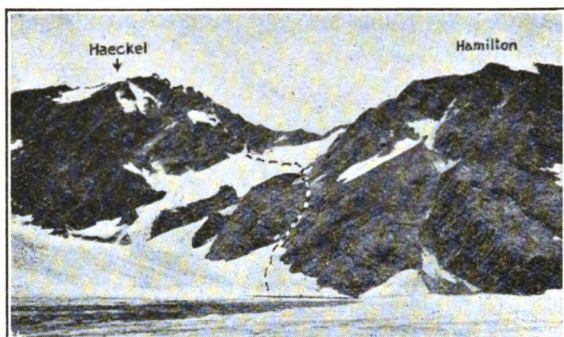
THE TWO THUMBS (8338 ft.).—First ascent, same party. From Mesopotamia in the Rangitata valley over the top of Mt. Brabazon (5879 ft.) to shack in Black Birch creek (6 hours). Thence up lateral creek on left to foot of E. face (3 hours). Then for 400–500 ft. up prominent couloir leading to S. ridge before it rises steeply. The couloir was then crossed to its true left bank, and ascent to the S. ridge made by steepish rocks and snow. By ridge easily to summit (2 hours 45 minutes). December 22, 1923.

Malte Brun Range.

MT. HAECKEL (9649 ft.).—H. E. L. Porter, C. S. Barker. First ascended in 1912 by Captain Head with Clarke and Murphy, who went from the Darwin glacier up the tributary Bonney and over the spurs of Mt. Hamilton to the col between it and Haeckel, thence climbing the S.W. arête to the top. Their route was repeated with a variation below in 1914 by Mr. H. O. Frind with Conrad Kain. Both parties reported the ridge to be very rotten. A new route was made last January. From the Darwin glacier an obvious 500-ft. couloir, well beyond the entrance of the Bonney and leading up towards Hamilton, was ascended to near the top, and a traverse made by a scree-laden shelf on to the upper Darwin glacier and across to the rock-rib in the centre of it (3 hours). This was ascended, till an easy way on to the glacier beyond was seen, and the glacier then

¹ See map, *A.J.* xxix. 104. There is a set of 1-in. Government maps in the Library, procured by Mr. Harper (cf. *A.J.* xxxv. 52).

crossed to a schrund, which divides its N. bank from a large snow-field above. Up the snow to the rocks below a big black patch on the S.W. ridge, which can be seen from a long way off (2 hours



FROM LOWER DARWIN GLACIER.

- - - Line of ascent.

15 minutes). Thence to the summit in 30 minutes. This part of the ridge is reasonably sound. The descent was by the same route, except that an unexpected passage through the ice-fall from the upper to the lower glacier presented itself. January 21, 1924.

Banks Range.

UNICORN (8394 ft.).—First ascent, H. E. L. Porter with Frank Milne. The Banks Range diverges from the main divide in a S.W. direction at Mt. Beatrice. The first peak on it is Dilemma (8592 ft.), ascended by Kain and Fyfe in 1914, and the second is Unicorn. From the Hooker hut the rock-rib beyond that used for the Copland Pass was mounted till it merged in a steep wall. A horizontal traverse and a short descent led to the glacial shelf above the Hooker valley. This was crossed and the main divide reached a few minutes S. of Mt. Beatrice (4 hours 40 minutes). The two peaks of Dilemma were traversed, the big gendarme between the two being climbed by a crack up its centre (65 minutes). From Dilemma a series of slabs about 400 ft. in height, which proved much easier than they looked, lead to a col, whence the moderate rocks of the N.E. ridge are climbed to the top (50 minutes). January 28, 1924.

Liebig Range.

MT. BLACKBURN (7835 ft.).—First traverse by the two main ridges; same party. The ascent was made from Gorilla creek by the S.W. ridge, the route of the first ascent in 1903, to the top in $3\frac{1}{2}$ hours. The descent was by the unclimbed N.E. ridge. This has

two prominent steps: the one close to the top was turned on the W. face, and a very difficult wall descended into the couloir falling from its base. The ridge was regained and followed to the next step, which was also turned on the west. The scree-chute at its foot was utilised till it ceased, and descent continued by the scrubby hillside back into Gorilla creek and so to the hut (4 hours). February 10, 1924.

Main Divide.

MR. BURNS (8984 ft.).—H. E. L. Porter with Frank Milne and C. Williams. First ascended by Mr. S. Turner and Peter Graham in 1914. They climbed from the Müller glacier to the N.E. ridge at a point W. of Bernard Pass and by ridge to top. The same route was taken this year (5½ hours), and the traverse completed by the first descent of the W. side of the mountain. From the top a snow-edge running N.W. was followed till lodgment could be effected on the Spence glacier. This glacier in its upper regions nowhere reaches the Landsborough, to which it is tributary, except in fragments over a steep rock-cliff of varying height. Farther down this cliff lies back here and there in slabby ribs. One of these was descended, and the cliff itself evaded by an avalanche-chute (5¼ hours). Return up the Landsborough to the foot of Fyfe's Pass, and by the slabs on its true left, traversing to the left at every obstacle, to the ridge of Mt. Montgomery, 150 ft. above the pass (2¼ hours). From Fyfe's Pass to the Müller hut (2 hours 20 minutes). February 17, 1924.

GREY PEAK (9800 ft.).—First ascent, H. E. L. Porter with Frank Milne and K. Ritchie. From Haast hut up Glacier Dome and round by Grand Plateau to the Haast ridge. This was followed for about an hour till descent was possible on to the névé of the Haast glacier above the ice-fall. Thence by crossing the schrund at its head—which would not be possible late in the season—to Pioneer Pass (4½ hours), and northwards along the ridge to Grey Peak, which is a 70-ft. rock pinnacle slightly W. of the ridge itself (40 minutes). February 20, 1924.

ROCKY MOUNTAINS OF CANADA.

THE CARIBOO RANGE.—These mountains, which form one of the important subdivisions of the Interior ranges of British Columbia, were visited during the past summer by a party consisting of Mr. Allen Carpe and Professor Rollin T. Chamberlin, accompanied by A. L. Withers of Jasper and two local packers. Between June 28 and July 9, eight summits over 10,000 ft. in height were climbed, seven of which were first ascents, including the highest peak of the range. This peak, which it is proposed to name 'Mt. Titan,' was found to be substantially in excess of 11,500 ft. in altitude, and is

probably the highest summit in any of the Interior ranges, surpassing Mt. Sir Sandford in the northern Selkirks. The entire range is heavily glaciated and the valley levels are low, the party's base camp at the tongue of the Sand Creek glacier being 4440 ft. The topographical work of the expedition included the location of the glacial sources of the North Thompson, Canoe, McLennan, and Shuswap (Raushwap) rivers and of Kiwa and Sand creeks. Data were obtained for a topographic outline map of the range. Further particulars will appear later.

ALBRED A PK. (MT. MILTON).—On July 18, 1924, the same party made the first ascent of this peak, situated in the northern Gold Range about seven miles S.E. of Clemina station, C.N.R., British Columbia. The peak is conspicuous by reason of a large glacier on its N.W. face which is in view from the railway. The altitude was found to be approximately 10,050 ft., or 7300 ft. above the valley. Progress was made with some difficulty through the heavily timbered lower valleys to a camp on the N.E. side of the mountain, whence the ascent was made, in bad weather, by way of the N. glacier and E. ridge. Further particulars will appear later.

ALLEN CARPE.

VARIOUS EXPEDITIONS.

Mont Blanc Group.

AIG. BLANCHE DE PEUTERET—PEUTERET ARÊTE—M. BLANC (4810 m. = 15,782 ft.). July 28 to August 2, 1923. Herr Alfred Horeschowsky, accompanied by Franz Piekietko. July 28, left Courmayeur noon. Bivouac on glacier at about 3000 m. below the Dames Anglaises. July 29, bad weather—remained in bivouac. July 30, 1 A.M., left by moonlight and ascended the steep névé—mainly ice—of the Dames Anglaises. Through an ice-fall to the terrace. Crossing many deep, hard-frozen avalanche gullies we followed the terrace to the N.E. arête of the Aig. Blanche 4109 m., 6.30 A.M. Then over partly iced rocks to the summit 4190 m., 9.30—rested till 11.30. Descended to Col de Peuteret. The ice arête descends finally to the Col by a steep ice-wall requiring long and careful step-cutting 3950 m., 5.30 P.M. On the other side of the Col another ice-wall led to the rocks of the Peuteret arête. We recognised that these altered conditions were the result of the great stone avalanche [v. 'A.J.' xxxiii. 433], the névé arête connecting the Col with the rocks, together with the hanging glacier leading to the Brenva glacier, having completely broken away. The new ice-wall needed hard step-cutting. Then up iced rocks to the summit of the corner bastion (= Eckpfeiler) 4381 m., 7.30 P.M., where we

bivouacked for the third time. [There is a mistake here—Pt. 4381 is much farther up and could never be reached from the Col, including hard step-cutting, in 2 hours. It took us, in 1893, without any cutting, 1 hr. 58 m. actual going from the Col to Güssfeldt's bivouac, which is lower than 4381 m., and, with Daniel Maquignaz leading, our party would be considerably faster than the heavily laden guideless pair.—J. P. F.] July 31, left at 5 A.M., a sunny day. Over the five rock towers, which were in part much iced, and then over the névé arêtes, mostly iced. Continuous cutting. At 11 A.M. in the middle of the ice-wall (= Eiswand) dense clouds blotted out the view. After overcoming the ice-wall we reached the much-iced rocks at about four ropes' lengths below the summit cornice, which was cut through at 1.15. Fog and very cold N.W. gale. Summit of M. Blanc 2.45. The cold and gale did not allow us to study map and compass. We followed the trail in the direction of the Vallot hut, but hardly visible footmarks led us to the left, and in half an hour we reached steep rocks which we followed to a sheltered place. Here we looked at the map and recognised that we were on the Tournette arête. We followed this down, and at 7.30 P.M. were on the M. Blanc glacier. Mist, storm, and approaching night forbade us the way to the Sella hut, and so we spent on the adjoining rocks (3400 m.) a fourth shudderingly-lovely (= schaurig-schönes) bivouac. Thunderstorm and driving snow all night. We were protected from the worst by our tent canvas, and the provisions lasted out. August 1, descended through knee-deep snow and séracs. We reached the Sella hut at 9.30 A.M.—our clothes wet through—our stomachs very dry. The weather cleared at midday. Left at 5 P.M. for Courmayeur, reached at 1 A.M., August 2. (Ö.A.Z. March 1924.)

[This expedition is no doubt a great testimony to the powers and endurance of the party, but the risks taken were outrageous. If Mr. Horeschowsky continues like this he will not go on long, which would be regrettable. His attempt on N. face of Matterhorn was recorded in the last number. He also ascended, alone, the famous Pallavicini couloir of the Glockner, and on August 5 and 6, 1923, repeated, with his present companion Piekietko, the Young-H. O. Jones-Knubel 1911 expedition to the Col des Grandes Jorasses and over the Punta Margherita to the summit of the Grandes Jorasses. Of his technical competence there can be no question.—J. P. F.]

Bernese Oberland.

SCHMADRIJOCH (3311 m. = 10,863 ft.). July 6, 1924. Mrs. G. Hasler, with Fritz Amatter and Peter Bernet, jun.—Left Obersteinberg at 1 A.M.; followed Captain Farrar's route of August 31, 1923, over the two long rock islands (compare 'A.J.' xxxvi. 90). From there onward conditions quite different. The big couloir was deeply grooved by ice-falls from the Nollen. The day being young, rapid progress was made up one of the snow-ribs left between

two deep grooves, but after a gain of about 200 ft. snow became bad. The party then traversed into the rocks on the left (ascending) side of the couloir, which were marvellously rotten and not improved by a little fresh snow. These rocks were climbed until just below the level of the Nollen, when a steep icy gullet between them and the Nollen led to the upper plateau. Amatter here had the spare rope added to the 30-mètre rope in use, and cut up till the rope was out—a slow business, for he had to dig through rotten snow to reach the ice. Above this pitch all was plain sailing except for a schrund or two. (Col, 7.45 A.M.)

The S. side of the col provided rather more work. Where Captain Farrar saw terraced rocks which might go 'pretty well anywhere,' the July 1924 party found the edges only of those terraces sticking out of a tremendously steep snow wall. It was a case of face to the wall down a seemingly endless ladder. When the first rocks were reached they were struck at a steep slab. To save time the spare rope was used. A second snow wall led to a little gully which went easily, and after that a snow traverse eastward led one to easy slopes and the much-crevassed glacier.

Fafleralp was reached at 12.55 P.M.; Goppenstein, about 4 P.M.; Grindelwald (by car from Interlaken), 8.50 P.M.

Amatter as fine as ever, and young Peter Bernet a most promising young guide.

Bregaglia (Bernina, W. Wing) Group.

CIMA SANT' ANNA (PIZ BADILET)¹ (3169 m. = 10,397 ft.). *Lurani* map. July 19, 1924. Lt.-Colonel E. L. Strutt with Pierre Blanc. Left excellent new Badile (Gianetti) Club hut, 06.35; crossed N. Porcellizo Pass, 07.35, and descended (W. slope of Pass is dangerous after midday) rocks on right bank of snow couloir, then base of couloir itself to Codera glacier.² Up this glacier, due N., to base of slanting gully leading upwards to gap ('Forcola della Punta'), between Punta (Dente) di Trubinasca and C. Sant' Anna. Up this gully, very steep and unpleasant, to gap, 09.00. Then up W. arête, interesting, of Sant' Anna to summit, 10.15. Near views most sensational. Left 10.45, first a few steps along S. arête to small cairn (which party rebuilt). Then by flowery ledge leading diagonally downwards, S. to N. across smooth E. face; where

¹ See in general *A.J.* xxvii. 411-2. *Lurani's* 'summit' is about 5 ft. distant, horizontally, from Tanner's, and possibly a foot lower (!).

² There is an obvious misprint in *Climber's Guide*, Bernina, Part I. p. 47, where for time of descent of snow couloir, you should read 40 minutes instead of 10 minutes. Attention is drawn to the misprint here, because, curiously, the *Guida* and new S.A.C. *Bergell Guide* appear to suffer from the same compositor and repeat the error.

ledge ends abruptly, party turned upwards for some 20 ft., very steep. A narrow and vertical cleft or chimney now opens out leading straight down, perhaps (?) 700 ft. long. Down this chimney, difficult, over three 'overhangs' to base which touches W. Badile glacier, perhaps 100 ft. below depression between Sant' Anna and tooth to the E. ('Badiletto' of *Guida*). Glacier is here mere ribbon of ice leading steeply to the depression or frontier ridge. Ice attained, 12.50. (Wrong times accidentally written in Club hut book.) Slid down ribbon, easy, to open glacier, thence over snow and débris to Badile hut, 13.15. Weather and conditions perfect.³ Expedition most interesting, but *ascent* of chimney should not be attempted till it has effectively been 'swept' by *several* descending parties. Time was lost owing to party possessing no spare rope.

MONTE DISGRAZIA ⁴ (3678 m. = 12,067 ft.). I. map. July 22, 1924. Lt.-Colonel E. L. Strutt with Pierre Blanc. Party left Masino at 13.45 on July 21, San Martino at 14.15, and attained, in magnificent weather but sweltering heat, the Passo di Remoluzza (c. 2800 m. = 9188 ft.) at 18.55. The Cecilia Club hut was reached at 19.20. [Hut in good condition, but pilfering has caused the blankets to be kept at Cattaeggio.] Party left hut at 04.15, reached Predarossa glacier in a few minutes, then bore E. towards base of *last* and highest tower of mountain's S.W. arête (Stewart's route lies farther S.⁵). Crossed bergschrund, wide and awkward, then mounted buttress, shown exactly E. of 'g' of [Predarossa] 'glacier' on Wilson map; first by crest of buttress, good broken rocks, then by snow gully, S., then by its true left bank, similar rocks—these deviations caused by the antics of a solitary chamois above. All this over new but relatively quite easy terrain, to crest of S.W. arête attained just S. of its highest tower. Weather now very cold and doubtful. Cassandra glacier face of mountain is everywhere possible but unattractive. After long halt, cut across steep ice under W. slope of above-mentioned tower and steered towards foot of first tower on S.E. arête of mountain, receiving another severe bombardment from chamois now on crest of this tower. Animal eventually descended and tore past party—within 10 yards. Up this first tower, very steep firm rocks, by its S.W. slope. Thence over crest of all 'the famed towers and gaps first traversed by Messrs. Still and Barlow in 1874,' ⁶ very steep, but not difficult under our perfect

³ Chimney appears to be new. Count Bonacossa's ascent, *cf.* S.A.C. *Guide*, p. 162, lies to the N., on Swiss slope; it does not touch E. face till near commencement of 'flowery ledge.'

⁴ See in general, Dr. Wilson's article and admirable map, *A.J.* xxv. 232-6. The latter (1910) is still the only accurate one available. Count Lurani's map, of course, only includes the 'Masino' slope of the mountain.

⁵ *A.J.* xxiv. 686-7.

⁶ *A.J.* viii. 20; xxv. 235.

conditions—splendid climb—to summit, 09.40 (1½ hour halts *en route*). Descent in worsening weather, 09.45, by N.W. arête and its S.W. slope to Cecilia hut (1½ hour). Thence by Sasso Bisolo (or Predarossa) glen to Cattaeggio, reached 17.00, and Masino Bagni, 19.15, in drenching thunderstorm (many halts *en route*).

Most interesting expedition. Little to choose between Mello (Remoluzza Pass) and Bisolo routes. Path is now vile except last (upper) bit of Bisolo glen, recently reconstructed. Both slopes of Remoluzza Pass are composed of steep boulders and track has never existed—a few paint marks. Bisolo glen is dull Engadine-like scenery; Mello is magnificent. The tactics of several 'guideless' parties on ordinary route of Disgrazia passed all belief.

Ofen Pass (Bernina, E. Wing) Group.

CIMA DI PIAZZI ⁷ (3439 m. = 11,284 ft.). I. map. By the N. face. July 10, 1924. Lt.-Colonel E. L. Strutt with Pierre Blanc and a local porter. From Sta Catarina-in-Val Furva on July 9, by car by new Livigno road to Arnoga in Val Viola Bormina (1½ hr.), thence a descent of 1000 ft., and fording of Val Viola torrent necessary before ascent of almost impenetrable thickets enabled party to attain a faint track leading up the Cardonne glen to uppermost chalets on *left* bank of stream, where the night was spent, 2½ hours. [Party should have stopped car at S. Carlo, some 1000 ft. below Arnoga, whence a convenient bridge and path lead to the Cardonne Alp.]

Start at 02.50 on July 10. Over steep grass and débris to W. Piazza glacier attained under Corni di Verva, thence up imposing glacier, steep in places, to the final snowy wall of the Cima di Piazza's N. face. Weather now very bad. Straight up this wall, some 1500 ft. in height, angle about 45°, keeping well to the W. of the snowy ridge or buttress dividing the two branches of the glacier. Summit of this wall (and of the mountain), attained at 07.00. In blizzard now raging, party unable to find S. arête, the easy way down. Proceeded eventually E. along top of wall, very sharp, till a *descent* brought them to cairn, whence easy rocky ridge leads S. Down this ridge to a conspicuous gap leading W. to Val Grosina, and E. towards Valtellina. Bearing E. over snow, débris, steep grass, and eventually a rough track, party arrived at Cepina in Valtellina about 13.00. Sta Catarina was attained by car later in the evening.

Our (excellent) porter, whose local knowledge to the S.W. of Bormio was nil, requested a total fee of 20 lire (!).

Expedition is very interesting, the N. face being exceedingly striking, but of no particular difficulty. [Times are very fast.]

⁷ See in general, Mr. Coolidge's admirable article, *A.J.* xix. 219–239.

Ascents appear to be most rare. Our route is approximately that of the first party, Dr. V. Ronchetti with L. Compagnoni, September 8, 1901,⁸ of which the route described in 'A.J.' xxi. 563-4, although starting from another and parallel glen, is but a variation in its upper part and lies just E. of the one described above.

It still appears impossible to procure a reasonably accurate map of the Italian slope of the Bernina, East Wing.⁹

The Selkirks (Canadian Alps).

MT. SIR DONALD (10,808 ft.), BY THE W. FACE. August 10, 1924.
Mr. Val. A. Fynn, with Chr. Hässler.—Second Ascent.

'While in Vancouver a couple of weeks ago I was looking at a large photo of Sir Donald as seen from Mt. Abbott, and the idea occurred to me to try the W. face of the mountain, as it seemed feasible. Upon arrival here [Glacier House], Ernest Feuz told me that he had actually made the climb on September 4, 1923, with Mr. Paul McIntyre, then about nineteen, who is to be congratulated sincerely on opening up this interesting route.

'On August 10 I repeated the climb with Christian Hässler by practically the same route.

'We took 4 hours from hotel to foot of face (see o on photo). From there 2 hours 10 minutes to the summit. We left our boots at o, using scarpetti for the climb. The lower part of the climb is practically devoid of handholds, and one is obliged to rely on the friction of the scarpetti on the somewhat smooth, slabby rocks. The face is divided by a more or less horizontal belt of perpendicular cliffs which are, however, easily overcome towards the right by means of a convenient chimney. Thereafter the inclination diminishes and there are no more difficulties.

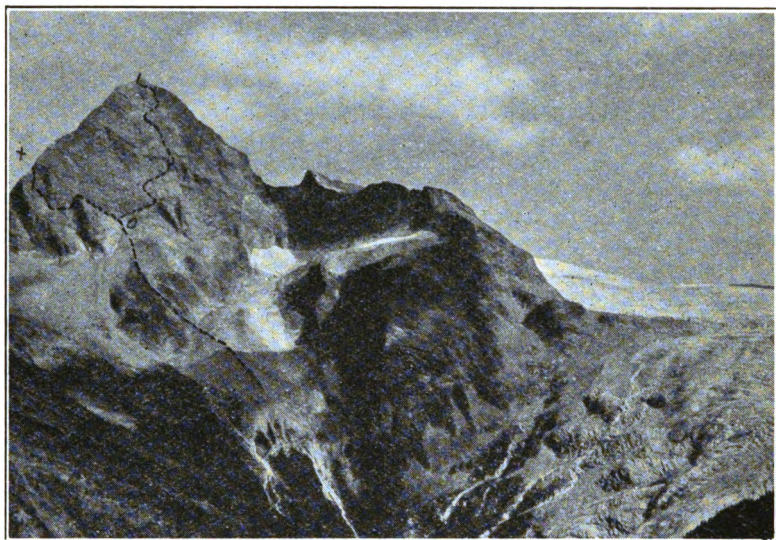
'The climb is safe in so far as falling stones are concerned, but only when there is no snow on the face. It should not be done early in the season. When in safe condition it is a fine climb, particularly when combined with the descent of the N.W. ridge and our subsequent traverse of the face.

⁸ Cf. *Le Alpi di Val Grosina*, by Dr. Corti and Signor Laeng, Brescia, 1909. A very useful little 'Climber's Guide' with a sketch map and illustrations.

⁹ It appears 'geographically' sound to compress the massif contained within the boundaries of Lake Como, Val Bregaglia, Upper and Lower Engadines (Inn Valley), Adda (and Valtellina) into one Group to be called the 'Bernina.' The Bregaglia and Ofen Pass Groups thus naturally fall respectively into the W. and E. Wings of the main or Bernina range.

Mr. Coolidge, whose opinion can be considered final in such matters, is strongly in favour of such grouping.

‘Descending, we followed the N.N.W. ridge, but turned back into the W. face before reaching the col between Sir Donald and Uto Peak. We did this so as to avoid the scree and snow between the col and the point at which we had left our boots. This traverse required care at first but otherwise was not found difficult and we reached our boots in $2\frac{1}{2}$ hours from the summit. I had made what I thought was the second ascent of Sir Donald by the N.N.W. ridge with A. M. Bartleet in 1909, but had not been on this ridge since, whereas Christian had climbed it a number of times more recently.



MT. SIR DONALD AND GLACIER, W. FACE FROM MT. ABBOTT.

In consequence, he suggested that he go down first, and this plan worked out very well and saved considerable time.

‘I now understand that the first party which climbed Sir Donald from the col between it and Uto followed the ridge for about two-thirds of its length and then turned off to the right into the here easy W. (or is it really N.W. ?) face and completed the ascent in this way, so that as a matter of fact Bartleet and I were the first to follow the N.N.W. ridge throughout.’

[*Cf.* also Mr. Howard Palmer’s admirable volume, ‘Mountaineering and Exploration in the Selkirks’ (New York : Putnams, 1914), chap. v. and Appendix I. (notes on the Sir Donald range).]

ALPINE NOTES.

'BALL'S ALPINE GUIDE,' THE WESTERN ALPS.—The edition (1898) by Mr. Coolidge covers the Maritimes, Graians, Dauphiné, M. Blanc group, and Pennines to the Simplon. With maps of each district, 1 : 250,000, and a general map. Price 10s., or 10s. 4d. post free. Obtainable from any bookseller or the Assistant Secretary.

'BALL'S ALPINE GUIDE,' THE CENTRAL ALPS. PART I.—The edition (1907), by Rev. A. A. Valentine-Richards, covers Switzerland N. of the Rhone and the Rhine. With nine maps, 1 : 250,000, and a general map. Price 5s., or 5s. 4d. post free, or unbound 2s. 6d., or 2s. 10d. post free. Obtainable as above.

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MR. COOLIDGE's edition of Ball's 'WESTERN ALPS' is still the only complete guide to the country described, and, save as to the detail of inns, is as instructive and sufficient to the mountaineer—and to the climber with eyes—as when published, while the maps are admirable.

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'GUIDES DES ALPES VALAISANNES.'—

Vol. I. Col Ferret to Col de Collon, by M. Kurz, 10s.

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Vol. III. Col Théodule to Weisstor, by Dr. Dübi, 8s.

Vol. IV. Col Simplon to Furka, by M. Kurz, 8s.

At Stanford's, Long Acre, W.C. 2.

A CLIMBER'S GUIDE TO THE ROCKY MOUNTAINS OF CANADA.—By Howard Palmer and J. Monroe Thorington, published for the American A.C. by the Knickerbocker Press, N.Y., 1921. This very useful summary, with several maps, of what has been done in the Rockies to 1921, can be obtained from the Assistant Secretary, 23 Savile Row, price 7s. 6d.

THE 'CLUBFÜHRER DURCH DIE BÜNDNERALPEN.'—Vol. IV., covering the Bregaglia and the Disgrazia group, by H. Rütter, with the assistance of Christian Klucker, can be obtained from Sauerländer and Co., Aarau, Switzerland.

THE ALPINE CLUB OBITUARY :	Date of Election.
Montgomery, H. de Fellenberg	1866
Fairbanks, W.	1876
Hughes, Reginald	1880
Cozens-Hardy, Lord	1891
Synnott, H. J.	1898

THE death of MRS. CHARLES HUDSON, widow of the great mountaineer who lost his life on the Matterhorn on July 14, 1865, occurred on May 22.

MEMORIAL BRASS TABLETS in memory of Sir Edward Davidson, Mr. E. A. Broome, and Mr. Walter Larden have been placed in the English churches at Riffelalp, Zermatt, and Arolla respectively. The tablets were erected by friends in the Alpine Club, many of whom attended the dedication services.

ENGLISH LAKE DISTRICT.—Reverting to the note on p. 161, Lord Leconfield has now generously consented to convey, for a stipulated price, to Mr. A. C. Benson and Mr. Gordon Wordsworth, for the acceptance of the National Trust, all the area of Scafell still in his ownership above the 2000 ft. contour line. The precise area has not yet been defined, but it is believed to include the lower slopes of Scafell Pike as well as of Scafell, thus joining the area presented to the Trust by the Fell and Rock Climbing Club.

THE PRESIDENT OF THE MILAN SECTION OF THE C.A.I., On. Gr. uff. Ing. Francesco Mauro, has presented to the Alpine Club a bronze emblem to celebrate the Jubilee of the C.A.I.

AN OLD RECORD.¹—'When we were traversing the arête of the SCHWARZMIES on August 30, 1924, we found in a bottle on the highest point a piece of paper on which was written (still clearly legible) :

6 SEP. 1884
W. E. UTTERSON-KELSO
REGINALD HUGHES
ADOLF ANDENMATTEN
JOS. MARIE BLUMENTHAL

I think it is unusual to find a record nearly forty years old.

E. B. BEAUMAN.'

It would seem that the first ascent must be ascribed to this party.

¹ For an older record, see 'A.J.' xxxi. 215.

COL DES HIRONDELLES.—This pass appears to be seldom crossed. It does not offer any other difficulty than possibly getting over the Bergschrund. In addition to the passages mentioned in 'Revue Alpine,' vol. xxv. p. 22, it was crossed—

July 12, 1904.—By Wicks, Wilson, and Bradby, with Henri Rey (porter, as Wilson led up and Wicks down).

August 9, 1904.—By J. P. Farrar with Daniel Maquignaz (leader), and Ernest Simond. In both cases from the rimaie to the top of the Col took about 2 hours.

LE MONT POURRI, TARANTAISE.—A new hut is to be erected near the end of the W. arête. Commandant E. Gaillard, M.C., discusses the question of site very thoroughly. Diagrams and views add much interest to his paper ('Revue Alpine,' vol. xxv. p. 27 *seq.*).

THE SCHMADRIJOCH.—*Cf.* p. 88. The passage was also made in September 1911 by the Rev. Walter Weston.

WE regret to learn that CHRISTIAN SCHOCHER, son of the well-known guide, Martin Schocher, accidentally shot himself when out hunting early in October. He was aged twenty-eight, and was the *garde-chasse* for his district.

WE regret to hear of the death in October of the Grindelwald guide, PETER KAUFMANN, aged 66. He and his sons are distinguished in that indistinguishable family by their great stature, and as being reliable guides.

CAPTAIN HUGH CHAMBERS, R.A.F., was over from New Zealand this summer, and was climbing with Captain H. E. L. Porter. Unfortunately the weather treated him very badly.

MR. G. F. TRAVERS-JACKSON, the well-known authority on the South African mountains, spent two months in the Alps this summer, and notwithstanding the weather was able, in the energetic company of Captain Finch and Mr. Guy Forster, to do over twenty expeditions.

A NEW ALTITUDE RECORD of 11,841 m. = 38,847 ft. was made in October by M. Callizo, the French airman.

THE *descent* of the COULOIR LOUROUSA on the ARGENTERA, first ascended by Mr. Coolidge with Christian Almer, was made on June 1, 1924, by Signor B. Asquasciati with the guides Giov. Piacenza (*vulgo* Ciàt) and Giacomo Miraglio (*vulgo* Giaculàs). The average slope is put at 50 per cent., and the height 800 mètres. The time taken was 10 hrs., of which nearly 6 were spent in hard ice work ('Revue Alpine,' vol. xxv. No. 3, with illustrations).

AN ARDUOUS TRAVERSE OF THE CERVIN—the first of the season—was made on July 8–10 by Mr. R. C. Carr, his son Herbert Carr, and Alfred Couttet of Chamonix. Just before reaching the Italian hut Herbert Carr took a pull from the methylated spirit bottle, thinking it was the water bottle. Naturally, very much handicapped by his ensuing indisposition, the progress next day was purposely slow, while the conditions were none too good. The Italian summit was reached at 3 P.M. in balmy sunshine. ‘Just below the shoulder heavy snow began to fall and the wind, almost suddenly, swept everything, below and above, into a swirling, blinding flurry of snow, ice, and hail—at moments it was impossible to see anything.’ The Solvay hut was only reached at 8.15 P.M., and the night spent there. ‘Alfred Couttet showed himself a really competent guide and mountaineer.’

INNS AND HUTS IN THE EASTERN GRAIANS.—At Cogne the ‘Grivola’ is good. At Dégioz in Val Savaranche the hotel Peano offers comfortable quarters. At Pont, at the good mountain inn, eggs, milk, and cheese are available but not always meat. At Val de Rhêmes travellers are hospitably entertained by the curé (accommodation for about four). At Val Grisanche there is a decently clean *cantine* good enough for a night. At Val d’Isère the hotel Moris maintains its excellent reputation, but is apt to be crowded with motorists.

The Herbetet hut has a day *gardien* only—accommodation for four—stove and fuel.

The Grand Nomenon shelter has accommodation for four. Milk at the adjoining Alp.

A large new hut has just been built above the Rutor lake—resident *gardien*—provisions and wine of a sort.—H. F. B. SHARP.

NEW GUIDE-BOOKS TO THE MT. BLANC GROUP.—Commandant Émile Gaillard, M.C., expects to issue in the spring Vol. VI. of his ‘Les Alpes de Savoie,’ covering the Groups of Trélatête and Mt. Blanc itself. It contains 291 itineraries, with many sketch maps and 40 numerous route-marked illustrations. Price 21.50 French francs, post free, from the Librairie Dardel, Chambéry, Savoie, France.

MM. Jacques de Lépiney, E. de Gisors, and le Dr. A. Migot have also in the press the first part of the elaborate Vallot guide to the whole group. It treats of the Chamonix Aiguilles in the most exhaustive manner. There can be few climbers whose knowledge of this part of the group equals that of the authors.

It is to be earnestly hoped that the map of the group, scale 1 : 20,000, upon which the MM. Vallot have been engaged for some years will soon make its appearance.

THE Jubilee of the Club alpin français was celebrated by a Reunion at Aix-les-Bains from June 22 to 29. Entertainments and excursions

of all kinds were organised. The meeting was largely attended by members of the C.A.F., while the Alpine Club sent as its delegates Mr. Geoffrey Young and Mr. H. F. Montagnier.

MR. FRESHFIELD'S DE SAUSSURE AND OTHER WORKS.—Mr. Freshfield writes : ' I regret to state that owing to a disastrous fire in the premises where Messrs. Arnold store much of their stock the larger portion of the remainder of three of my books has been destroyed. There remain of " The Exploration of the Caucasus " 150 copies, of " Hannibal Once More " 20 copies, and of " The Life of de Saussure " 39 copies. When these are exhausted the works in question will be " out of print."

' I am glad, however, to be able to add that Messrs. Atar of Geneva (Corraterie 11) are on the point of publishing a French translation made by Mlle. L. Plan of my " Life of de Saussure," with the illustrations, at the price of Frs. 10 (Swiss).

' The Publishers have been enabled to issue the volume at this very moderate price by the generous action of private individuals and several Genevese Societies who have subscribed in order to bring the work within the reach of the larger public and of the local schools.

' The volume has a Preface by Professor L. W. Collet, Doyen de la Faculté des Sciences de l'Université de Genève et Professeur de Géologie.'

HIMALAYAN NOTES.

THE KARAKORUM.

IN 1922 the Dutch mountaineers, Mr. and Mrs. Visser, made a first expedition to the Karakorum Mountains, to the north of Kashmir. The undertaking then met with insurmountable difficulties, but they have now left for India on a fresh expedition, accompanied by Franz Lochmatter.

The new expedition will be mainly scientific. The 1922 venture had in view the detailed exploration of mountains in regions already mapped out. The present attempt will be made through the Pamir to the north of the Karakorum. This region, totally unexplored, is situated to the north of the highest point of the group, K^a or Mount Godwin Austen, which is 28,250 ft. high, or only 750 ft. lower than Mount Everest.

The Dutch Royal Geographical Society, the Dutch Military Air Service, and the Committee of the Mount Everest Expedition have placed all available information at their disposal.

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2 E

CANADIAN AND AMERICAN NOTES.

WE much regret to note the death on September 21 of DR. E. DEVILLE, the Surveyor-General of the Dominion of Canada. During his long tenure of office great progress has been made in mapping the vast territories of the State. Mountaineers, in particular, will remember with appreciation the great work of the Interprovincial Survey, the series of maps of which have much facilitated the later exploration of the Canadian Alps.

The late Dr. Deville and his Department have always exhibited great willingness to assist the Editors of the *ALPINE JOURNAL* in their endeavour to make known the results of recent explorations.

PROFESSOR J. W. A. HICKSON, of Montreal, the well-known traveller and explorer in the Rocky Mountains, has been nominated President of the Canadian Alpine Club.

THE MT. LOGAN EXPEDITION.—A reconnaissance of the mountain was made by Capt. A. H. MacCarthy, joint leader of the proposed expedition. He is of opinion that the ascent presents a problem of the first order both as to its approach and ascent.

Up to August 23 last, \$6000 had been subscribed towards the estimated cost of \$11,000. Further subscriptions can be sent to Mr. A. L. Mumm, 23 Savile Row, W.

MT. ROBSON.—Owing to the Canadian A.C. Camp on Mt. Robson pass, the mountain suffered quite a procession of climbers, with one or two exceptions under the guidance of Conrad Kain. Mr. V. A. Fynn, than whom there is no better judge, writes :

‘ After camp, Alfred Streich and Hans Kohler, two Swiss guides from Innertkirchen, now in the service of the C.N.R., took two or three parties to the top. All the parties climbed the mountain by way of the most easterly of the two ridges on the S. face. This is the ridge which was used by Conrad Kain on his descent on the occasion of the first ascent of the mountain. Several women made the trip, and those I spoke to all agree that the climb is an easy one, and I am told that it is not necessary to use the hands at all and that one can walk right up the ridge, but opinions differ widely as to the conditions near the top where the ridge in question runs into the ice-cap of the mountain.

‘ I had a very good look at Mt. Robson from the S. on a perfectly clear day, and have come to the conclusion that the ridge which all

the parties used this year is not the proper way to the top of that mountain. This ridge runs *into* the ice-cap of the mountain, as above stated, and in its highest portion is absolutely dominated by part of that ice-cap. All the parties passed under an overhanging ice-wall, or séracs, and were exposed to ice-falls for at least half an hour. Thereafter they turned E. and cut their way up the S.E. face of the ice-cap, again encountering dangerous ice conditions. It seems to me that this route is quite unnecessarily risky.

‘Further W. and nearer to the Mt. Robson Pass, is another rock rib, or arête, which is considerably steeper than the one just discussed but which appears to present very solid rock, and which lands the climber *on* the ice of the ice-cap and not *under* it. Furthermore, it reaches the ice at a very much higher point than the more E. ridge. There is no doubt at all in my mind that this is by far the better and safer route. I am sure that it will require a little more climbing, but I do not think that this will be at all difficult, and if I ever go up Mt. Robson I will certainly take this ridge and not the more E. one. I see no fun in making a target of myself for a chunk of ice. I know exactly what the result will be if I am struck and will waive demonstration.

‘The reason why people do not agree as to the difficulty of the ascent beyond the rocks is probably that those who were in the first parties and who witnessed the step cutting no doubt thought highly of the difficulties, while those who found the steps ready cut for them probably received an oppositely exaggerated impression. My own view is that Mt. Robson *via* the more easterly arête of the S. face is easy but dangerous.’

A new C.N.R. lodge has been built on Robson Pass, and is in charge of one of the Hargreaves brothers. This would be a good starting-place for the ascent of Mt. Robson.

MR. S. PRESCOTT FAY, 2 Otis Place, Boston, Mass., is good enough to send us :

1. Plot plan of region between Yellowhead Pass and Peace River, say between 53° and 56° N. lat.

2. Sketch map on scale 1" = 10 miles of the same region.

3. Sketch map on scale 1" = 4 miles of region about Mt. Alexander Mackenzie and Mt. Ida.

These maps were made during his climbing and hunting expeditions in 1912, 1913, 1914. Mt. Alexander Mackenzie and Mt. Ida will probably be found to be of considerable height and have not yet been climbed.

Reference should be made to Mr. Fay's articles in ‘Appalachia’ xiii. 238–257, and ‘Canadian A.J.’ vi. 170–177, giving a general idea of the country.

Donald Phillips made three trips, two in winter, over some of the country to the N. of Mt. Robson in 1911–1913, and gave an account

of them, with a rough sketch-map, in 'Canadian A.J.' vi. 178-187. In 1914 and 1915 Miss Mary L. Jobe twice visited Mount Alexander Mackenzie, both times under the leadership of Donald Phillips, who made a spirited attack on the 'Big Mountain,' nearly reaching the summit. They returned a third time in 1917, very late in the season. See 'Canadian A.J.' vi. 188-200, vii. 82-99, ix. 79-89; and for summaries of these articles 'A.J.' xxx. 362, xxxi. 133, xxxiii. 146.

MR. HOWARD PALMER writes :

'Quite suddenly early in August I arranged with Professor Hickson of Montreal to go to the headquarters of the Athabaska and attempt Alberta. Conrad Kain also came along. We had a good trip in, passing Alberta and tackling King Edward Peak (11,400 ft.) as a training climb. When we returned to Alberta a few days later and got a climbing camp established, the weather broke, and for a week we never saw the top or even enough of the final peak to pick out a route! It was buried in clouds continuously. With the exception of one small mountain near by that offered no difficulty, there wasn't a thing which we could do, so we finally had to retreat, the storm continuing all the way back to Jasper. It was the most unsatisfactory summer I ever had in the Rockies.'

MR. H. LAUPER, A.A.C., Berne, now resident in California, writes :

'I myself made only a very few climbs. In June I made an attempt on Mt. Shasta, which can be climbed from W. on horseback over an easy trail. I started from the E., but though I spent two nights and two days fighting for a way I didn't get through the most terrible underwood and bush.

'In August I went up to the Mt. Rainier National Park and climbed Mt. Rainier (14,403 ft.). I also made two minor climbs, one of which was new, but of little importance.

'Twice I set out for Little Tacoma (11,117 ft.). This is considered to be the best climb up there, but on the first attempt my companion fell sick and on the second, while bivouacking on the Cowlitz glacier, the weather turned bad and I had to return the next day after being thoroughly drenched.'

ALPINE ACCIDENTS.

THE ACCIDENT ON PIZ GLÜSCHAIPT.

FROM midway through the first week of August and onwards till the end of September the weather in the Bernina Group was of the coldest and stormiest nature and quite unsuitable for serious mountaineering. On August 13 after a threatening night, a great snow-storm swept the upper slopes down to 7000 ft., and at 9 A.M.

fine, powdery, 'winter' snow was falling in the village of Pontresina. Nevertheless, a party consisting of Dr. Schick of Vienna and Herr Garrels of Bremen with the Celerina guide Juon had left St. Moritz on the previous afternoon, with every conceivable sign of approaching bad weather, for the Mortel Club Hut, where the night was spent. Starting early on the 13th for Piz Glüschaint (3600 m. = 11,812 ft.) and not content with the ordinary E. arête route—under the circumstances a sufficiently dangerous expedition—they proceeded to try the mountain by its never easy S.W. arête. They are stated to have been seen, during a break in the clouds, high up on that arête. The story is unconfirmed and appears highly improbable.

During the whole of the 13th and for the greater part of the 14th the blizzard continued unabated. As nothing had been heard of the party a large number of guides, who had been waiting in readiness, set out from Pontresina in still very bad weather on August 15. On the morning of the 16th the two amateurs, roped together, were found on the W. slopes of Piz Glüschaint towards the point called Piz Cappucino, 3382 m. They were frozen stiff and appear to have died while attempting to eat. Of the guide there was no sign. Schick had injuries to one leg and both were considerably cut about the face, but in neither case were the wounds of a really serious nature. A long end of rope with a loop attached descended from the two bodies towards the (adjacent) bergschrund. It was presumed that after the collapse of his companions, Juon had detached himself and attempted to regain the valley for help. A prolonged search was accordingly made in the bergschrund. All in vain and the mystery of Juon's disappearance appeared destined to remain unexplained. The guides,¹ who had all worked with a will and in fearfully cold weather and wind, were able to bring the bodies back the same day to Pontresina where the funeral took place.

In the middle of October last, profiting by the fine weather which had prevailed for three weeks throughout the Alps, a party succeeded in making the ascent of Piz Glüschaint. On the actual summit and lashed to the rocks by a rope was found the body of Juon. It was covered with an overcoat and one leg was broken. According to the present theory, Juon appears to have broken his leg during the ascent, and, presumably, close to the summit. His companions having covered him up and tied him to the rocks—a proof of the severity of the storm, for the summit is quite wide—descended by the same route, instead of the easy E. arête of which they were probably ignorant. They perished from cold and exhaustion at the end of all the difficulties, but, of course, still very high up and with the descent of the entire Sella glacier still before them. Their

¹ Among those who especially distinguished themselves was Christian Schocher shortly to meet his death under still sadder circumstances.

injuries were possibly caused by the same accident in which Juon broke his leg.

Neither guide nor amateurs appear to have had much experience, and it is safe to say that *any party* attempting a similar climb in the weather then prevailing was running a thoroughly unjustifiable risk. In this case the party was bound to meet with disaster.

What more can be said ?

THE ACCIDENT ON THE AIGUILLE VERTE.

THE deplorably uncertain weather of last season has robbed the Groupe Haute Montagne of the C.A.F. of two of its most enterprising members in the persons of the young Barons Georges and Waldemar de Meyendorff, sons of the late Imperial Russian Ambassador at the Spanish Court. The two young men ascended the Verte on August 11, and presumably bivouacked near the summit, as they were seen early next morning near the summit of the Rocheuse by a party led by Camille Simond, the excellent guide of Argentiére, who were making the ascent of the Droites.

The weather broke soon after, and continued very stormy for some days. No further trace of the two young men could be found. They probably perished from exposure.

It is stated that their original intention was to descend by the Grands Montets arête, which has never yet been followed in its entirety.

Although little over twenty, they had already given evidence of great endurance, and the list of their expeditions in the *Revue Alpine*, 3rd trimestre, 1924, is testimony to their competence as mountaineers.

A commemorative Mass was said on September 29 at the Russian Church in Paris, and was attended by many of their comrades of the G.H.M.

REVIEWS.

Hannibal Crosses the Alps. By Cecil Torr, M.A. Cambridge: at the University Press, 1924.

Hannibal once more! Since Mr. Freshfield published ten years ago a small volume under the above title this old controversy has, at least in this country, been allowed to rest. It has now been revived by Mr. Cecil Torr, a Cambridge scholar and antiquary who, living on the skirts of Dartmoor, has from time to time entertained the public by his successive volumes entitled 'Small Talk at Wreyland.' His new booklet, called 'Hannibal crosses the Alps,' might fairly be described as 'Tall Talk about Hannibal.' For Mr. Torr, in this

respect resembling not a few previous writers on the same subject, is nothing if not positive. His language is, indeed, almost pontifical. He is confident that he knows exactly where Hannibal crossed both the Rhone and the Alps, and those who are unlucky enough to differ from him—including 'several members and one former President of the Alpine Club'—he classifies summarily as 'silly men'!

To take the main points only in his argument: he believes Hannibal crossed the Rhone close to Tarascon and not above Avignon—as Napoleon argued and the majority of historians have held; he is sure that Polybius' island was the district of Vaucluse and not that between the Rhone and the Isère, and that Hannibal marched almost straight up the Durance and Guil Valleys to the Col de la Traversette (9679 ft.), passing by on his right the 3000 ft. lower Col de l'Argentière (6543 ft.).

It must be noted in the first place that, in order to maintain his view about the identifications of the Crossing and the Island, Mr. Torr has to go against the opinion of most historians, an opinion based on their acceptance of emendations in the texts of the classical authors as regards doubtful and unrecognisable river-names, which have been adopted by the editors of the best recent editions of both Polybius and Livy. As to these doubtful names Mr. Torr proceeds to indulge in conjectures of his own which, while imputing to Livy a palpable self-contradiction, fail altogether to convince us of their plausibility.

As to Hannibal's Pass, Mr. Torr's conclusive reason for his identification of it as the Col de la Traversette is that he considers the speech reported by Polybius to have been made by the Carthaginian general to his followers on the Alpine watershed must be read literally as an exact account of the view before his and their eyes. Others, including all the great historians who have been in favour either of the Little St. Bernard, the Mont Cenis, or the Mont Genève, have found in the phrase alleging that the position of Rome itself was pointed out, a clear indication that the whole speech was as to its substance an oratorical invention of the historian. But this view is vehemently repudiated by Mr. Torr. He can see no alternative between dismissing Polybius as a worthless historian, or taking his every phrase in the most literal sense. In order to do this he goes so far as to provide Hannibal with a map on which to point out to his officers the position of Rome!

Let us briefly recall what is known of the Col de la Traversette. It lies just N. of Monte Viso and formed the most direct and perhaps only communication between the at one time French Marquisate of Saluzzo and Dauphiné. On this account it was thought worth while, as long ago as A.D. 1480, to pierce the extremely steep final ridge by the first Alpine tunnel. The full history of this remarkable undertaking, with the documents relating to its completion, has been recorded in the late Signor Vaccarone's '*Le Pertuis du Viso*' (Turin, 1881). We have the further advantage of being able to lay before our readers an accurate account of the present aspect of the pass lately

received from our Honorary Member, Monsieur H. Ferrand, of Grenoble. He writes as follows :

'Le Col de la Traversette est certainement une des brèches les plus escarpées des Alpes avec des pentes exagérées sur les deux versants. . . . Entre la hauteur du tunnel et le sommet du Col le nom de mur n'a rien d'exagéré. N'est-ce pas que c'est amusant de voir discuter cette proposition par des écrivains qui ne connaissent pas les Alpes ! Si un avion providentiel transportait M. Torr sur le Col de la Traversette il frémirait de l'impossibilité de sa prétention.' The Col, M. Ferrand adds, is officially put at 2950 m., the opening of the tunnel at 2915 m., and its length at 75 m.¹ With these figures the approximate angle of the final slopes can easily be calculated. It is very nearly 45°. The photograph of M. Ferrand's he kindly allows us to reproduce shows a 'promontory' which Hannibal, if he crossed this pass, may have used as a pulpit, and also the character of the summit-ridge which, we are told by Polybius, served for two nights as a camping-ground for the Carthaginian army.

Those who care to plunge deeper into the controversy will find a notice of Mr. Torr's 'Hannibal crosses the Alps,' by Mr. Douglas Freshfield, in the September *Geographical Journal*, and further correspondence between the author and his critic in the November and December numbers of the same periodical.

Mountain Climbing. By Francis A. Collins. John Long, Ltd. London. 1924. Price 10s. 6d. net.

THIS is a book which repays perusal. The writing of it must have cost the author much time and much research, and incidentally must have given him much pleasure, for clearly he is writing on a subject he adores. Mr. Collins is an American ; but the mountain, the world over, is his Mecca ; and, in addition to his own fairly wide reading, he acknowledges indebtedness to 'the Secretary of the Bureau of Associated Mountaineering Clubs of America,' and to other sources. His aim is to extol the lure of the mountains, to give a digest of the history of mountain climbing, and to supply the would-be mountaineer with practical and useful information. The arrangement of his material is singular and far from systematic, both as to the general scheme of the book and as to the matter embodied in the various chapters. He flits from flower to flower, like the bee, pausing and enjoying the materials he selects, and passing by that which he has failed to notice and that which has failed to interest him. Of his sixteen chapters, the first may be called introductory, while the second, and all from the seventh to the sixteenth, refer respectively to the early and the modern history of mountain climbing. Chapters three to six deal with snow-craft, rock climbing, training, and equipment. Such is the general

¹ These are the correct figures. There are two misprints in those given on p. 242 of the September *Geographical Journal*.

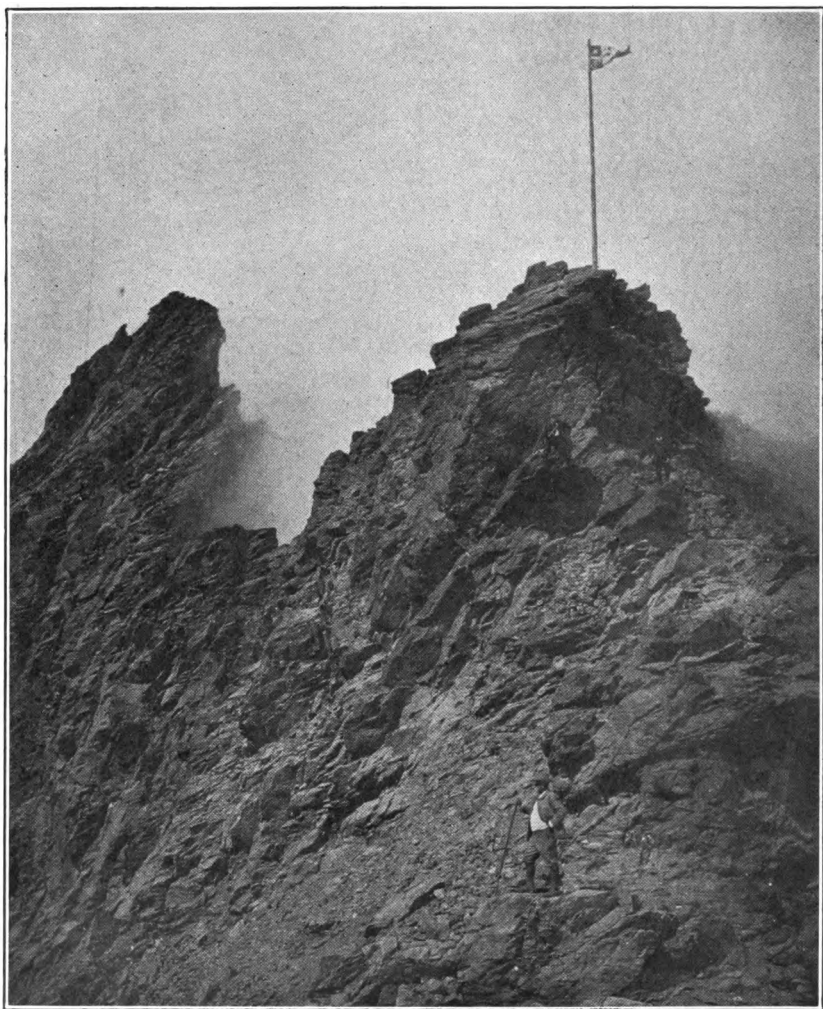


Photo: H. Ferrand.

SUMMIT OF THE COL DE LA TRAVERSESETTE.

scheme—if it can be called a scheme—of the book. The author has a pleasant style, which makes easy reading, enlivened at times by sparks of humour, such as the remark that Noah's method of ascent of Mt. Ararat 'is unlikely to be repeated.' The book is well printed in good-sized type, and is embellished by about twenty photographs, from excellent sources, representing scenes in the Alps, the Rockies, and the Himalaya. The American origin of the work is evidenced by the presence of a chapter entitled 'Climbing at Home,' i.e. in America, and also by the constant use of certain terms, such as 'trail' instead of 'route.' There is a bibliography of about forty items, rather curiously selected, like the rest of his material, and, like it, also not quite reliable, the authorship of 'Hours of Exercise in the Alps,' for instance, being attributed to Samuel Turner. There is no index.

Turning first to the historical chapters, we find much that is of interest, both ancient and modern, and everywhere the systematic lack of system which distinguishes the book throughout. In the chapter on early mountaineering passages are quoted from Scheuchzer, Gesner, and de Luc. He then devotes six pages to 'the outstanding achievement in mountain climbing of this period, and indeed of all history'—Napoleon's crossing of the Alps. Immediately following is some account of Tyndall's ascent of the Weisshorn in 1861, though why this isolated achievement is recorded in this chapter is not obvious. Tyndall's guides were 'greatly impressed, not only by the courage of the great scientist who led them, but by his unexpected agility in jumping from point to point.' So ends Chapter II., on 'The First Mountain Climbers,' and the historical record lies submerged until we come to Chapter VII., on 'The Conquest of Mont Blanc.' 'The Climbing of the Matterhorn' follows, and so to the end of the volume, the story of climbing in the Alps, the Pyrenees, the Rockies, Alaska, the Andes, Ararat, Africa and the Himalaya is briefly given, and the selection of material, though easy to criticize, is quite good.

It is, however, in Chapters III. to VI. that readers of the *Alpine Journal* will find most entertainment, and it is here that we first find unmistakable evidence that our enthusiastic author is throughout a student and compiler, rather than a mountaineer who draws on his own experience in his selected instructions to beginners. Practical remarks about avalanches are followed by theoretical considerations on the movement of glaciers and the formation of crevasses, which, 'though often very narrow, are usually too wide to be jumped.' Some remarks on step-cutting, where 'on steep slopes, the step should, if possible, be large enough to accommodate both feet at the same time,' follow closely on instruction in 'one of the most exhilarating experiences in mountain climbing,' i.e. the glissade. 'The climber sits down, feet first, with his ax (*sic*) held behind him to serve as a rudder and a brake. . . . A descent of hundreds of feet which took hours to climb can thus often be accomplished in a few seconds.' We are not told why the climber

should 'sit down,' nor why, if so, it should be 'feet first,' nor how the feet could be conveniently otherwise disposed—but the glissader is wisely warned to see to the security of his landing, as 'the slope may overhang a precipice, and the climber be thus, at the end of a swift descent, hurled into space.' If one may dissent from some of the advice given in this chapter ('Snowcraft'), all will agree with its ending: 'Skill in snow-climbing is only acquired by long practice. It cannot be learned through a correspondence school.'

The section on Rock Climbing lays much stress on the menace of falling stones, which, we are told, 'is far commoner in the Himalayas than in the Alps,' and much space is given here, and in the chapter on 'Equipment,' to the use of the rope. 'It is not, as some imagine, a tether that prevents the members of the party from wandering off and being lost.' It is a safeguard, and 'It is easy for an experienced man well placed on rock or snow to handle a man who has fallen and is dangling at the end of a rope.' The rope is 'the mainstay of the rock climber,' but it 'is necessary for a party to keep the rope tight between them, which means that all move at exactly the same rate.'

In quoting the above passages and some which follow, the reviewer does not wish to convey the impression that the book contains no sound advice and instruction. The two chapters which have not yet been considered (on 'Equipment' and 'Training') contain a large amount of useful and interesting information, some of it hardly expected, such as that on Alpine Cinematography, and the physiological adjustment of the number of red corpuscles in the blood in relation to altitude and acclimatization, which, however, leads to the amazing though incontrovertible announcement that 'An ascent of upward of twenty thousand feet, if made in a few hours, places extraordinary demands on the climber's physical endurance.'

The advice given as to outfit is inadequate and ill-proportioned. Warm gloves are not mentioned, but much prominence is given to 'the long Alpine scarf, which should be about six feet in length, of some heavy warm material,' and which can apparently be adapted to five different uses. Clothes should be made of some fabric which is warm, light and waterproof, and 'strong enough not to tear when stretched across jagged rocks.' We are not told where this ideal material is procurable. One is tempted to quote more, but members of the Alpine Club should read the book. They will derive some instruction and much amusement, and if the information concerning themselves is apocryphal, it is flattering, and should evoke a warm feeling towards an author who holds them in so high esteem. Concerning the 'one hundred and fifty thousand climbers' enrolled among the various British Mountaineering Clubs, our author says but little beyond extolling their taste and their enthusiasm, but to the Alpine Club proper is very rightly accorded the acme of requirement and attainment.

'The regular course in mountain climbing required by the British

Alpine Club is suggestive of the requirements of some university before the conferring of a degree. The training begins with a definite amount of rock and crag climbing among cliffs and mountains at home. Excellent preliminary experience is to be gained in Scotland. After satisfying the Club requirements by this preliminary course, the students of climbing next turn to the Swiss Alps for advanced work. After passing this experience to the satisfaction of the Club examiners, a course of climbing is taken in the Caucasus. Next in turn the student climbs in the Southern Alps. His European experience is now complete, and he must travel to New Zealand for special work. This acquired, he in turn climbs the mountains of Siberia. At the end of this term he is considered qualified to assay the climbing of the Himalayas, which forms, so to speak, the post-graduate course in mountaineering.'—C. W.

Les Alpes du Dauphiné, vol. i. (Les Massifs de Belledonne et des Sept Laux).
Par Emile Gaillard. Macon: C. Faure. 22 fr.

COMMANDANT GAILLARD, whose four volumes of the Alps of Savoy have been reviewed in the JOURNAL, is now engaged on a similar Guide to the Dauphiné. The present volume covers the outlying group of the Belledonne, the traverse of whose three peaks was, until lengthy cables were fixed, a difficult climb. The second volume is to cover the massifs of the Meije and the Ecrins, and may be expected next season.

The present volume contains seven outline ridge maps (scale about 1 in. = 2 km.) based on the yet unpublished 1 : 50,000 map of the Service Géographique de l'Armée, as well as a 1 : 50,000 sketch map of the whole district, and offers ample evidence of the great care bestowed by the author on all his work.

Hill Paths in Scotland. By Walter A. Smith, F.F.A. Price 2s. 6d.

THIS little book will prove invaluable to any walker, or even climber, who proposes to visit Scotland. The author knows his subject as probably nobody else does. It is conveniently divided into sections, and leaves out very little that could be considered a hill path. One or two small errors of minor importance have crept in—mostly of spelling or heights—for instance, why rob Garven (Garbh Bheinn) in Ardgour of 400 ft. of its height, which is 2903 ft., not 2500 ft. ? This mistake is probably due to the reduced Ordnance Survey maps. It is correctly given in recent issues of the 1-in. map and in Bartholomew's $\frac{1}{4}$ -in map. In spelling there are a good many small mistakes, such as in Affaric section—Beallach-na-Spoine for Beallach-na-Sroine—but these small errors are of quite secondary importance.

C. B. P.

Den Norske Turist Forening's Aarbog, 1924.

YET once again, 'Den Norske Turist Forening' has delivered to its now numerous members its welcome 'Aarbog'—or 'Aarbok'—consisting of 234 pages beautifully illustrated. Especially is this

the case with the full-page views of H. Chr. Geelmuyden, notably those of the birch trees on the two sides of the beck, 'Fra vestre Aker,' throwing their dark shadows upon the still water; also a view of two horses pulling down the top bar of a gate. Equally good too are the three forest scenes, 'Skjennungen,' 'Skoginterior fra Rustan i Aker,' 'Fra den överste del av Akerselven.' Sigvard Heber's view, 'Aga ved Sörfjorden,' is, at least to me, a reminder of Ulvik.

Wilse, an excellent photographic artist, has, to my mind, not been quite so fortunate in his choice of subjects as one would have expected him to be. Still, they are very good.

The papers are full of interest, and deal with the most fascinating features of almost the whole country from Lofoten to the Naze.

WM. CECIL SLINGSBY.

Im Reiche der Medea: Kaukasische Fahrten und Abenteuer. By Dr. Alfred Nawrath. Leipzig: Brockhaus. 1924.

THE chief interest in Dr. Nawrath's readable little book of post-war Caucasian travel centres in his description of German colonisation in the Caucasus. Both collectively and individually, the many thousands of Germans and German-speaking Austrians and Hungarians seem to have successfully penetrated practically every sphere of Caucasian economic and intellectual life, and to have kept on good terms both with the Bolsheviks and the many native races of that heterogeneous country. *Many local Bolshevik commissaries even send their children to German schools.*

The only allusion to mountain climbing in this book is to the first post-war ascent of Mount Kazbek, on August 28, 1923, by a party of Georgians (including several young ladies—all under the age of twenty-one) accompanied by one Russian, one German, one Swede, and one Armenian, as well as by three guides and twenty-five porters. The porters went only as far as the Yermoloff hut (3600 mètres high), where the night previous to the ascent was spent.

It may be added that Dr. Nawrath pays an enthusiastic tribute to Dr. Douglas Freshfield's books on the Caucasus, which he calls of 'absolutely fundamental value.' He also expresses his admiration for the great English geographer's nobility of style and elevated thoughts.

British Ski Year Book, 1924. Edited by Arnold Lunn. Price 5s.

THIS book includes much of mountaineering interest, thus a traverse of the Jungfrau, with descent by the N. (Guggi) face by MM. Amstutz and v. Schuhmacher, both of the Academic A.C., Berne, on July 10, when a very free use was made of skis; also an admirably described and superbly illustrated ascent of the Eiger on ski, made in May by MM. Arnold Lunn, Richardet, and Amstutz.

Mr. Lunn writes on the history of ski-ing, about which there can be nothing he does not know. He also contributes an appreciative

notice of A. C. Irvine, lost on Everest. Colonel de Watteville makes some sound remarks on guides and ski instructors. The rest of the volume is, of course, mainly devoted to ski-ing matters.

The Freshfield Glacier, Canadian Alps. By Howard Palmer. Published by the Smithsonian Institution, Washington, D.C.

MR. HOWARD PALMER is well known as a mountaineer, and his admirable book on the Selkirks has placed him in the front rank of mountaineering writers. The present pamphlet is a scientific examination of the features of the Freshfield Glacier, which is about 9 miles long and 4 miles wide, occupying with its tributaries an elliptical basin in the midst of a group counting twenty-five peaks over 10,000 ft. high. It is furnished with many photographs, a diagram, and a map. Mr. Howard Palmer concludes that most of the glaciers in the Canadian Alps are, during the last fifteen years at least, in a state of retreat. The Clemenceau, a very large glacier S.W. of Fortress Lake, appears to be stagnant at an advanced stage close up to its terminal moraine.

Aiguilles. By C. Egger. Orell Füssli, Zürich.

THE author is the well-known artist whose charming house on the heights above Bâle is a favourite rendezvous of his very many mountaineering and other friends—and few men can have more. The little book is a humorous study of the principal Chamonix aiguilles, thus the ascents of the Requin, Géant, Dru, Grépon, are described, and also the magnificent arête walk from the Géant to the Rochefort. The book contains a whole series of excellent illustrations. The detailed pictures of the ascents of the Requin, Dru, and Grépon are among the best of their kind which we have seen.

THE ALPINE CLUB LIBRARY.

The following books have been added to the Library:—

Club Publications.

Akad. Alpen-Verein, Berlin. 20. Jahresber. 1922–23. $9\frac{1}{2} \times 6\frac{1}{4}$: pp. 39: 3 col. plates. 1924

New expedition: *J. Heidenhain*, 1923, tr. *Larainfernerkopf* z. Nördl. Fluchthorn.

Appalachian Mountain Club.

Bulletin. Vol. 17, no. 8. $9\frac{1}{2} \times 6\frac{1}{4}$: pp. 413–525: plates. April 1924

This contains, *inter alia*: *H. S. Hall*, First ascent of Mt. Clemenceau (examination, 1922, with *A. Carpe*: ascent, 1923, by *H. B. de Villiers-Schwab* and *H. S. Hall*): *W. Helburn*, On Ktaadn in March: *A. Bent*, A first ascent in the Wind River Range, Wyoming.

First ascents: 1922, of Mt. Apex by *Schwab, Carpe, and Hall* is mentioned: Mt. Victoria by N.E. face by *V. Fynn*: 1923, *Thorington and Ladd* with

Kain, North Twin, and second ascent of Mt. Athabasca: *H. Palmer and A. Carpe*, Mts. Brazeau and Unwin: *W. D. Wilcox*, Mt. Baker from Peyto Lake: *J. W. A. Hickson*, Mt. Spring-Rice.

Appalachian Mountain Club.

— Register for 1914. Supplement to Bulletin, vol. 17. April 1924

C.A.I. Cremona. Il Monte. Organo ufficiale. Anno 2, no. 4. $9\frac{1}{2} \times 6\frac{1}{2}$: pp. 16. Aprile 1924

— Trieste. Calendario dell' Escursionista. $4\frac{1}{2} \times 2\frac{1}{2}$: pp. 74. 1924

C.A.S. Chaux-de-Fonds. Bull. annuel, no. 32. 8×5 : pp. 102. 1923

C.A. Siciliano, Sez. di Palermo. Bollettino mensile. Anno 2, no. 7. $9\frac{1}{2} \times 6\frac{1}{2}$: pp. 4. Marzo 1924

D.u.Oe.A.-V. Bayerland. Anwendung des Seiles. 12. Aufl. $5\frac{1}{2} \times 3\frac{1}{2}$: pp. 23: ill. München, 1922

D.u.Oe.A.-V. Tauriskia. Jahresbericht, 1923. 9×6 : pp. 30: pl. of Tauriskia-Hütte. 1924

Il Monte. See C.A.I. CREMONA.

Nederl. Alpen-Vereeniging. Mededelingen, 22. Jourgang. $9\frac{1}{2} \times 6\frac{1}{2}$: pp. 175: plates. 1924

Rucksack Club. Rules, etc. $4\frac{1}{2} \times 3\frac{1}{2}$: pp. 23. 1924

— Journal. Vol. 5, no. 2. $8\frac{1}{2} \times 5\frac{1}{2}$: pp. 131-237; plates. 1924

Contains: *E. W. Steeple*, Lofoten: *A. S. Pigott*, Grépon from Mer de Glace: *G. S. Bower*, Cold. Nantillons: *A. W. Boyd*, Birds of British hills: *E. Thomas*, Alps revisited: ascents Diablerets, Bietschhorn (W. arête), Jungfrau, Mönch, Finsteraarhorn, Aig. de l'M., Grds Charmoz, Dru, Dent Blanche, etc.: *R. E. W. Pritchard*, New climbs at Wasdale, Tophet Wall, Pillar Rock (W. face): *I. R. Ashton*, 1923, First ascents, Tryfaen, S. buttress; Obelisk route.

S.A.C. Association British Members. Report, etc., 1923. 7×5 : pp. 59. 1924

— Basel. Jahresbericht für 1923. 61. Vereinsjahr. 9×6 : pp. 70: plate. 1924

Contains In Memoriam notices of N. Stöcklin and of S. Preiswerk-Sarasin.

— Jahrbuch. 58. Jahrg. 1923. 10×7 : pp. viii, 322: plates, maps. Bern, 1924

The articles are: *H. Kuhn*, Hch Dübi zum Abschied als Jahrbuchredaktor: *G. End*, Val Pontirone—P. delle Streghe, Torrentegruppe: *O. Roegner*, Zwischen Rhone und Rheinquellgebiet, Adulamassiv, Medelser Berge, Gothardmassiv, Blindenhorn, Basodino: *A. v. Rydzewsky*, Hochtouren im Bergell 1893, Cima di Rosso v. N., Torrone Occid. v. N., Cima di Castello v. O., P. Badile Ostgrat, P. di Ferro Orient. v. N. Among his ascents are the following first: 1891, Cima di Cantone, Torrone Centr.: 1892, Pta. Rasica, Cima di Vazzeda, Cima di Rosso N.E. arête: 1893, Ago di Sciora: 1898, P. Tremoggia N. face, Badile W. arête: 1899, Badilet, Pta. Alessandra: 1900, Pta. Rydzewsky, tr. Torrone Centr.: 1891, P. Bacone S.E. arête, Cima del Largo W. face: 1892, P. Gumelli, Cima Vazzeda: 1895, Scioranadel: *R. Streiff-Becker*, Der Itatiaya, Brazil: *P. Simon*, Gebirgstopograph: *J. Kursteiner*, Bakteriengehalt v. Erdproben der Hochalpinen Region: *E. Furret*, Natur- u. Kulturbilden aus d. Abruzzen: *P. L. Mercanton*, Variations d. glaciers 44. Rapport: *L. Meyer*, Turtmanntal.

— Sect. genevoise. Programmes des courses 1924. $5\frac{1}{2} \times 3\frac{1}{2}$: pp. 40.

Sierra Club Bulletin. Vol. 12, no. 1. $9\frac{1}{2} \times 6\frac{1}{2}$: pp. 109: plates. 1924

Contents: *F. P. Farquhar*, Place names in the High Sierra: First ascents, 1923, *N. Clyde* and — *Elrod*, Mt. Wilbur: *Mr. and Mrs. C. W. Michael*, Minarets: etc.

— Circular. No. 7. $9\frac{1}{2} \times 6\frac{1}{2}$: pp. 4. March-April 1924

— 23rd Annual Outing. Glacier Nat. Park. $6 \times 3\frac{1}{2}$: pp. 16. 1924

Sucal. Notizario mensile. Anni 3-4, nos. 9-12, 1-2. $7\frac{1}{2} \times 4\frac{1}{2}$. 1923-24

Verband Alp. Vereinigungen Oesterreichs. Mitteilungen No. 1. 1. Jahrg. 12 $\times$ 9. April 1924

New Books.

- Allgemeine Bergsteiger-Zeitung.** Nachrichtenblatt für Touristik u. Wintersport. Geleitet von Ludwig Ginot. Erscheint jedem Freitag Nachm. 1. u. 2. Jahrgänge. $18\frac{1}{2} \times 12\frac{1}{2}$: ill. Wien, 1923-24
- Allix, André.** Le trafic en Dauphiné à la fin du moyen âge. In *Rev. de géogr. alp.*, Grenoble, t. 11, fasc. 2. $10 \times 6\frac{1}{2}$: pp. 273-413. 1923
- Les avalanches de 1922-3 en Dauphiné. In *Rev. géogr. alp.*, Grenoble, t. 11, fasc. 2. $10 \times 6\frac{1}{2}$: pp. 513-27. 1923
- Les enseignements du Mont Everest. In *Rev. géogr. alp.*, Grenoble, t. 12, fasc. 1. $10 \times 6\frac{1}{2}$: pp. 99-120: plates. 1924
- Bailey, F. M.** Through Bhutan and Southern Tibet. In *Geogr. Journ.*, London, vol. 64, no. 4. $9\frac{1}{2} \times 6\frac{1}{2}$: pp. 291-8: ill. Oct. 1924
- Baud-Bovy, Daniel.** Peasant art in Switzerland. $11\frac{1}{2} \times 8$: pp. xxiv, 75: num. plates, some col. London, Studio, 1924
- Benesch, Fritz.** Führer auf den Schneeberg. 5. Aufl. $6\frac{1}{2} \times 4$: pp. vii, 134: map, plates. Wien, Artaria, 1924
- Beraldi, Henri.** Le Sommet des Pyrénées. Notes d'un Bibliophile. II. Tuquerouye. $9 \times 5\frac{1}{2}$: pp. 233. Paris, 1924
- A further work on Ramond, kindly presented by the author.
- Biscoe, C. E. Tyndale.** Kashmir in sunlight and shade. $8\frac{1}{2} \times 5\frac{1}{2}$: pp. 315: map, plates. London, Seeley, 1922
- Bozano, L.; Questa, E.; Rovereto, G.** Guida delle alpi apuane. 2a ed. con la collaborazione di Bartolomeo Figari. C.A.I. Sez. Ligure. $6\frac{1}{2} \times 4\frac{1}{2}$: pp. 319: maps. Genova, 1922
- Bregeault, H.** La photographie en montagne. In *La Photo pour tous*, Paris, nos. 1-2. $11 \times 8\frac{1}{2}$: pp. 5-7, 27-28: ill. Janv.-Févr. 1924
- Canada.** A Playground for the Empire. $8 \times 5\frac{1}{2}$: pp. 32: plates. Ottawa, Depart. of Interior, 1924
- Includes plates of the Rockies.
- *Scenic.* 7×10 : pp. 4: plates. Published by Can. Nat. Railways, 1924
- Caumery, M. L.** Bécassine alpiniste. Illustrations de J. Pinchon. $12\frac{1}{2} \times 9$: pp. 64: col. ill. Paris, Gautier et Languereau, 1923
- An amusing skit on alpine travel and climbing.
- Collet, W.** Géologie du M.B. Fasc. 2. pp. 53: plates.
- Guide Vallot. Fasc. 2. Aperçu sur la géologie du massif du Mont-Blanc et des Aiguilles Rouges. 7×5 : pp. 52: plates. Paris, Fischbacher, 1924
- Collins, Francis A.** Mountain climbing $7\frac{1}{2} \times 5$: pp. vii, 314: plates.
- A handbook on mountaineering. London, Long, 1924
- Cooper, A. Heaton.** Wild Lakeland. Painted by A. Heaton Cooper, described by Mackenzie Macbride. $8 \times 5\frac{1}{2}$: pp. 229: col. plates. London, Black (1922)
- Dainelli, Giotto.** A propositi de morfologia dell' alta montagna alpina. In *L'Universo*, Firenze, vol. 5, no. 6. Giugno, 1924
- Dauzat, Albert.** Toute la montagne. $7\frac{1}{2} \times 4\frac{1}{2}$: pp. 325. Paris, Charpentier, 1924. Fr. 7.50
- La terre, les eaux, le ciel—de la plante à l'homme—les saisons et les heures —l'alpinisme—l'esthétique de la montagne.
- De Amiciz, Ugo.** Piccoli uomini e grandi montagne. $12\frac{1}{2} \times 9\frac{1}{2}$: pp. 247: plates. Milano, Treves, 1924. 30s.
- Durier, Charles.** Le Mont-Blanc. 7me éd. Annotée et illustrée par J. et C. Vallot. $9 \times 5\frac{1}{2}$: pp. xvi, 407: plates. Paris, Fischbacher, 1923
- Egger, C.** Aiguilles. Ein Bergbüchlein. $8\frac{1}{2} \times 6$: pp. 72: 24 plates. Zürich, Orell Füssli (1924)
- Requin, Dru, Rochefort, Jardin, Géant, Grépon.
- Enzensperger, Ernst.** Bergsteigen. $8\frac{1}{2} \times 5\frac{1}{2}$: pp. xx, 369: ill. Berlin, Weidmann (1924)
- A new handbook on mountaineering.
- Everest.** The Mount Everest dispatches, 1924. In *Geogr. Journ.*, London, vol. 64, no. 2. 9×6 : pp. 145-65. Aug. 1924

- Ferrand, Henri.** Le Temple de la Nature. Ex Bull. Sect. de Géogr. $9\frac{1}{2} \times 6\frac{1}{2}$: pp. 18: plates. Paris, Imp. Nat., 1924
- Ferrini, G.** L'Ascensione del Papa Pio XI. al Monte Rosa. Estratto dal Boll. 'L'Alpe.' $9\frac{1}{2} \times 6\frac{1}{2}$: pp. 11. Domodossola, Zonca, 1922
- Filippi, Filippo de.** Storia della spedizione scientifica italiana nel Himalaia Caracorum e Turchestan cinese (1913-1914). $10\frac{1}{2} \times 7\frac{1}{2}$: pp. xiii, 541: maps, plates. Bologna, Zanichelli (1923). 45s.
- Finch, George Ingle.** The making of a mountaineer. $9\frac{1}{2} \times 6\frac{1}{2}$: pp. 340: plates. London, Arrowsmith (1924). 30s.
Corsica, Wetterhorn, Jungfrau, Oberland, Tödi, Bifertenstock, Mte. Rosa, Matterhorn, Dent d'Hérens, Mt. Blanc, Aig. du Dru, Everest, Photography. A chapter on the Matterhorn—a beginner's impressions—is written by Mrs. Agnes Finch.
- Flaig, Walther.** Felsklettern in Bildern und Merkworten. 2. Hft. $5\frac{1}{2} \times 3\frac{3}{4}$: pp. 7: 21 plates. Stuttgart, Dieck (1924)
Plates of various positions in rock-climbing.
- Hochgebirgsführer durch die Nordrhätischen Alpen. Bd. 1. $6 \times 4\frac{1}{2}$: pp. xxxii, 208: maps. Vorarlb. Verlagsanst. Dornbirn, 1924
- Forrest, A. S.; Bagge, M. Hy.** Switzerland. $8\frac{1}{2} \times 5\frac{1}{2}$: pp. 92: ill. London, Griffiths (1924)
- France.** Études glaciologiques, t. iv. Glacier de Tête-Rousse (P. Mougin, C. Bernard). Les avalanches en Savoie (P. Mougin). Ministère de l'agriculture: Direction gén. d. eaux et forêts. $11 \times 7\frac{1}{2}$: pp. 322: plates. Paris, Imprim. Nat., 1922
- Frazer, R. A.** Central Spitsbergen. In Geog. Journ., London, vol. 64, no. 3. $9\frac{1}{2} \times 6$: pp. 193-204: ill. September 1924
- Freshfield, D. W.** More talk about Hannibal. In Geog. Journ., vol. 64, no. 3. $9\frac{1}{2} \times 6$: pp. 241-44. September 1924.
A review of C. Torr's 'Hannibal crosses the Alps,' *q.v. ante*.
- Galwan, Ghulam Rassul.** Servant of sahibs. A book to be read aloud. $8\frac{1}{2} \times 5\frac{1}{2}$: pp. xix, 282: portrait. Cambridge, Heffer, 1923. 9s.
A remarkably interesting diary of Himalayan travel by a headman of coolies.
- Gex, F.** Le climat du premier semestre 1923 dans les alpes du nord. In Rev. géogr. alp., Grenoble, t. 11, fasc. 3. $10 \times 6\frac{1}{2}$: pp. 641-54. 1923
- Le Petit Saint-Bernard. $7\frac{1}{2} \times 5$: pp. 172: plates. Chambéry, Dardel, 1924
Le mystère, le Col, les routes, l'hospice, les voyageurs.
- Les avalanches de fin décembre 1923 en Savoie. In Rev. géogr. alp., Grenoble, t. 12, fasc. 1. $10 \times 6\frac{1}{2}$: pp. 129-56. 1924
- Les avalanches de l'hiver 1922-3 dans les alpes françaises du nord. In Rev. de géogr. alp., Grenoble, t. 11, fasc. 2. $10 \times 6\frac{1}{2}$: pp. 487-511: plates. 1923
- Gibert, André.** Le Valgaudemar. In Rev. géogr. alp., Grenoble, t. 10, fasc. 4. $10 \times 6\frac{1}{2}$: pp. 663-782: map, plates. 1923
- Giovane montagna, Rivista di vita alpina.** Anno x., nos. 1-2. $9\frac{1}{2} \times 6\frac{1}{2}$: pp. 36: ill. Genn.-Febr. 1924
- Gleize, P.** Alpinisme. $9\frac{1}{2} \times 6$: pp. 50. Chamonix, 1923
An illustrated catalogue of equipment, etc.
- Gontard, Jean.** Dans les Sierras de Californie. $7\frac{1}{2} \times 5\frac{1}{2}$: pp. 247: plates. Paris, Roger, 1923
- Gorceix, Ch.** Expériences de laboratoire sur la formation des montagnes. In Rev. géogr. alp., Grenoble, t. 12, fasc. 1. $10 \times 6\frac{1}{2}$: pp. 31-78: plates. 1924
- Göschener-Alp.** Col. panorama. $21 \times 5\frac{1}{2}$. Zürich, Fretz, 1924
- Gartner, Othmar.** Das besinnliche Wanderbuchlein. Auf alten Pfaden im Lauterbrunnental. $7 \times 4\frac{1}{2}$: pp. 101: plates. Zürich, Orell Füssli (1924). Fr. 4.50
Contains elegant small reproductions of old prints.

- Harper, Arthur P.** Southern Alps of New Zealand. A southern paradise. Written for the N.Z. Council of the British Empire Exhibition. $9\frac{1}{2} \times 9$: pp. 24: ill. Wellington, Skinner, 1924
- Inaka.** Vol. 18. $9 \times 6\frac{1}{2}$: pp. 96: plates. Japan, Kobe, 1924
This is the final volume. Presented by H. E. Daunt, Esq.
- Italy.** The war in Italy. Soldiers' edition. $9\frac{1}{2} \times 7$: pp. 536: plates. Milan, Treves, 1916
- Kelly, H. M.** Pillar Rock and neighbouring climbs. A climbers' guide. 8×5 : pp. 68: plates. Barrow, 1924
- v. Komarnicki, Cyula.** Die Hohe Tatra, Hochgebirgsführer. $6 \times 4\frac{1}{2}$: pp. xciv, 475: maps, ill. Budapest, Turistik u. Alpinismus, 1918
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Revelli, Mariz. Il canto della montagna. Romanzo. 7½ × 5½ : pp. 295.
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de Saint-Saud, Comte. Cinquante ans d'excursions et études dans les Pyrénées
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Paris, Barrère, 1924

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Torr, Cecil. Hannibal crosses the Alps. 6½ × 5½ : pp. vii, 40.
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Conclusion: 'It was a matter of life and death to complete his march
before the snows had made the Alps impassable. He would therefore take
the very route . . . by the Col de la Traversette or the Col d'Argentière.'

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- Walliser, J.** Monte Rosa. Aus der Bergwelt von Zermatt. 9 × 6 : pp. 32 : plates. Winterthur, Konkordia, 1922
- Walton, Elijah.** Collection of drawings by, of the late T. G. Bonney. 10 × 6 : pp. 3-4. Christie & Co.'s sale, April 1924
- Ward, F. Kingdon.** Snow mountains of Yunnan. In Geogr. Journ., London, vol. 64, no. 3. 9 × 6 : pp. 222-31 : ill. September 1924
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- Young, G. W.** A great rock climb. The Grépon from the Mer de Glace. In Cornhill Mag., London, N.S. no. 338. 9 × 5½ : pp. 155-72. August 1924
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- Baud-Bovy, Daniel.** L'Olympe. In *La Grèce Immortelle*. 7½ × 5½ : pp. 41-87 : map, plate. Genève, Boissonnas, 1919
- Cunningham, Allan.** The Life of Sir David Wilkie. 3 vols. London, Murray, 1843

The following letters by Sir David Wilkie are in vol. 2, pp. 433-6 :—

Geneva, 25 July, 1827.

On our arrival at the inn at Chamouny, we were told that two Englishmen had started yesterday morning, at 9 o'clock, to make the perilous journey to the top of Mont Blanc, with nine guides, making, in all, eleven. Two, it had been observed by telescope, had just reached the summit. All eyes were now on the alert. The telescope I got hold of at an upper window, and observed, with minute attention, on the side of the summit, some small black objects, that by degrees changed their places, and by a progress very slow, but perceptible, appeared advancing upwards. To all the people in the house this was at once a subject of intense curiosity, and by turns each saw and bore witness to the wonder. I counted to the number of nine. A party of four were in advance in a group with one ahead : while others, two and two, lagged considerably behind. As they were proceeding from us, their movements were slow and little perceived. Onwards, however, we saw them reach the summit, where, little as they seemed, they were nearly lost in the deep blue sky. Even the last two, after lingering, stopping, and resting, approached at length the top, where we could see the others reappear as if to receive them. The top of Mont Blanc is the highest point in Europe, perhaps the highest point on earth, that the insignificant powers of man have ever enabled him to reach. It has not been reached before above six times, and they tell me but by one Englishman. A short half-hour seemed to satisfy them with their unwonted elevation, when we saw them begin to descend.

July 26th.

To-day all was expectation, and, at 9 o'clock, after forty-nine hours' absence, the two Englishmen arrived. Their names were Mr. Charles Fellowes and Mr. William Hawes, of 26, Russell Square. Nine guides and a boy were with them : the boy had gone for his own pleasure.

They had, on the 24th, reached the usual resting-place, the Grands Mulets. This is a black ridge of rocks at the head of the glacier by the side of which they ascended, and which they had much fatigue and risk in crossing to get to. At the Grands Mulets they slept for the night, under a tent which they took with them, in which, with blankets, &c., they were warm and comfortable, disturbed only by the noises of the avalanches falling.

On the 25th, at daybreak, they proceeded up a valley of snow all round them, and then took a new route, by which they escaped the dangers which had destroyed three men who had made a similar attempt before. As they got towards the summit their fatigue and weakness became extreme ; their pulses beat high, particularly in the head ; some were seized with headaches, spitting of blood, and bleeding at the nose, with loss of appetite, and one even with vomiting ; all breathed with difficulty, and required frequent rests. Hawes, who is a little stout fellow of twenty years, was the only one nearly exempted from these symptoms. On the top, the air was cold beyond belief, but the view appeared to comprehend everything. They appeared high above every object ; saw, on one side, the Lake of Geneva, Neuchâtel, and the Jura Mountains ; but the clearest and most beautiful was on the side of Savoy and Italy. The Apennines, the Mediterranean, and France, known to be in sight from Mont Blanc, were not then visible. At three o'clock they began to descend, a matter of facility compared with the ascent. At six they gained their resting-place on the Grands Mulets, where they rested for the night, as it was wet, windy, and cold. The noise of the avalanches, always most frequent in rain, had much the effect of continued thunder. This morning they had again to cross the glacier, to facilitate which they were tied two and three together, in a chain of ropes, to secure them in crossing the deep crevices between the ice. The danger being thus passed, they reached Chamouny to breakfast, having finished the journey without loss, without hurt, and apparently without over-fatigue, but which they said they would never advise any one again to attempt. Every circumstance was favourable, but they thought neither the view nor the game could at all compensate for the danger and pain of the undertaking.

- Enquist, Frederik.** Der Einfluss der Winder auf die Verteilung der Gletscher. Inaugural-Dissertation. Ex Bull. Geol. Inst. Uppsala, 14. 10 × 6½ : pp. 108 : maps. Uppsala, Almquist, 1916
- Hooker, Wm. Dawson.** Notes on Norway ; or, a brief journal of a tour made to the northern parts of Norway, in the summer of MDCCCXXXVI. Unpublished. 8½ × 5½ : pp. (iii), 127 : plates. Glasgow, Richardson, 1837
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- Jones, Katharine Viriamu.** Life of John Viriamu Jones. 8½ × 5½ : pp. vii, 400 : portraits. London, Smith, Elder, 1915
- Juvar, Lorenzo.** Tales and Legends of the English Lakes and Mountains. 7½ × 4½ : pp. 312 : 2 plates. London, Longmans (? c. 1860)
- Kadner, Herbert.** Führer durch die Wettersteingeirge. 4. Aufl. v. H. Schwaigers Führer. 6 × 4 : pp. xx, 244 : map. München, Lindauer, 1921
- Keller, C.** Junk's Natur-Führer. Schweiz. 6½ × 4½ : pp. vii, 475 : ill. Berlin, Junk, 1921
- Lake District.** England's lakeland. A tour therein. 8½ × 5½ : pp. 76 : col. plates. Windermere, Garnett : London, Simpkin, Marshall (? c. 1880)
- Lechner, Ernst.** Graubünden. Illustrierter Reisebegleiter durch alle Tal-schaften. 5. verbesserte Aufl. 8 × 5 : pp. (iv), 284 : map, ill. Chur, Manatschal Ebner, 1920
- Powell, Addison M.** Trailing and camping in Alaska. 8½ × 5½ : pp. (xvii), 379 : plates. London, Hurst & Blackett, 1910
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- Sacco, F.** Il glacialismo d. valli di Susa. Ex L'Universo, anno 2, no. 3. 9½ × 6½ : pp. 32 : map. Agosto, 1921
- Il glacialismo u. valli Grisanche, Rhêmes e Savaranche. Ex L'Universo, anno 2, nos. 11-12. 9½ × 6½ : pp. 73 : map, ill. Nov.-Dic. 1921
- Il glacialismo nel Gruppo del Gr. Paradiso. Ex Boll. d. Comit. Glaciol. ital. 10 × 6½ : pp. 129 : map, plates. 1921-22
- La crue actuelle des glaciers dans la vallée d'Aoste. Ex Augusta Pretoria. 9½ × 6½ : pp. 14 : ill. Torino, 1921
- Osservazioni glaciologiche nella regione dolomitica del Veneto. Ex Boll. d. Soc. Geol. ital., vol. 39. 9½ × 6½ : pp. 213-20. 1920
- Theobald, G.** Naturbilder aus den Rätischen Alpen. Ein Führer durch Graubünden. 4. umgearbeitete Aufl. v. Dr. Chr. Tranuzzer. 8 × 5½ : pp. vii, 335. Chur, Manatschal Ebner, 1920
- Valais.** Mein Wallis. Festgabe zum Walliser-Herbstfest. 9 × 6 : pp. 72 : ill. Zürich, 1921

Items.

- C.A.I.** Milano Jubilee bronze plate, 3 × 2½, representing three eagles on a rock with a mountain background.
- Illustrated Post Cards.** Raccolta delle belle 22e d'Italia. Serie N. 11, I Monti d'Abruzzo : N. 45, Passo della Mendola : N. 64, Monti del Cadore. Roma, Mompurgo, 1923
- Map.** British Columbia, Kootenay, Sheet 19. 7·89 miles to inch. Ottawa, 1924
- Carte de la Savoie au 250,000e par M. le Ct. de Lannoy de Bissy. Chambéry, Dardel, 1923
- Stamps,** with mountain views. *Transylvania*, 9 varieties : *Turkestan*, 4 varieties : *Bulgaria*, 2 varieties. *Guadeloupe*, 25c. : *Azerbaidjan*.

PROCEEDINGS OF THE ALPINE CLUB.

A GENERAL MEETING of the Club was held in the Hall, 23, Savile Row, London, W. 1, on Tuesday, April 1, 1924, at 8.30 p.m., Mr. A. D. Godley, *Vice-President*, in the Chair.

The following candidates were balloted for and elected Members of the Club, namely, Mr. Henry Snow Hall, Jr., Major John Hedley Thornton Priestman, and Mr. Joseph Wood, Jr.

The CHAIRMAN announced with regret the deaths of Mr. H. J. Synnott, elected in 1898, Mr. A. Barnes, elected in 1913, and Dr. W. A. Wills, whose death had occurred that afternoon. Dr. Wills was elected in 1888, served on the Committee in 1893, and as Honorary Secretary 1897-1900. Mr. E. H. F. Bradby paid eloquent tribute to his memory.

Mr. R. A. FRAZER then read a Paper entitled 'A Plea for Mountaineering in Central Spitsbergen,' which was illustrated by lantern slides.

Professor J. Norman Collie spoke afterwards and said that he agreed with Mr. Frazer that there was a good deal to be said for mountaineering in those parts. What had struck him when visiting the Lofoten Islands was the extraordinary colour effects, and it seemed to be much the same in Spitsbergen. He congratulated Mr. Frazer on the success of his expedition.

The Chairman said that he was sure everyone in the Hall had enjoyed the very interesting Paper of Mr. Frazer, and the remarkable series of slides he had shown. He remarked in passing that the prophecy of Sir Martin Conway that Spitsbergen was likely to become a regular tourists' haunt had not yet been fulfilled. He would propose what he thought would be in the minds of all present : a very hearty vote of thanks to Mr. Frazer. This was carried with acclamation.

A GENERAL MEETING of the Club was held in the Hall, 23 Savile Row, London, W. 1, on Tuesday May 6, 1924, at 8.30 p.m., Dr. Claude Wilson, *Vice-President*, in the Chair.

The CHAIRMAN communicated to the Members present the latest news with regard to the Mt. Everest Expedition and General Bruce. He said he was sure they would be glad to hear that General Bruce had recovered from his illness.

Members were informed that Mr. D. W. Freshfield had accepted Honorary Membership of the Club, offered to him by the Committee to mark his 60th year as a Member. This announcement was received with enthusiasm by those present. Mr. Freshfield thanked the Members for their cordial reception.

Further, that the King of the Hedjaz had conferred on Sir Alexander Kennedy the title of Pasha, on the occasion of his recent and third visit to Petra.

The death of Mr. John Fisher was announced. He was elected a Member of the Club in 1883, and he must have been well over 80 years of age at the time of his death, which occurred on May 1. He was an old Civil Servant. In 1860 he climbed the Allalin Horn and Allalin Pass in company with the late Sir Leslie Stephen and F. W. Jacomb. Twenty years elapsed between that and his next expeditions to Mont Blanc and Monte Leone, which he undertook in 1880. In 1882 he climbed the Finsteraarhorn and the Aletschhorn.

The Chairman invited discussion on the regulations for the Winter Dinner, and the meeting decided, *nem. con.*, to accept the New Regulation proposed by the Committee that the price of each Dinner Ticket should be 13s. 6d. exclusive of wines, thus allowing every Member to order his own wines.

Mr. J. A. PARKER then read a Paper entitled 'The Pyrenees,' which was illustrated by lantern slides.

Discussion followed. Mr. D. W. Freshfield related briefly his experiences in the Pyrenees, and remarked, à propos of the lecturer's statement that the Pyrenees were seldom visited by Members, that, to the west of the Central Pyrenees, there was a group of mountains known as the Picos de Europa, which were not at all well known, and which were still less frequently visited. He had been there some years ago and had had some really good climbing. The Comte de Saint-Saud had written a monograph on this group, which was in the Club Library. Others who took part in the discussion were Mr. G. E. Howard, Mr. W. P. Haskett-Smith, and Sir Alexander Kennedy. Mr. Parker replied to one or two questions which had been put to him, and in conclusion was the recipient of a very cordial vote of thanks, proposed by the Chairman.

A GENERAL MEETING of the Club was held in the Hall, 23 Savile Row, London, W. 1, on Tuesday, November 4, 1924, at 8.30 P.M., Brig.-Gen. The Hon. C. G. Bruce, C.B., M.V.O., *President*, in the Chair.

The following candidates were balloted for and elected Members of the Club, namely, Mr. E. L. Fothergill, Major R. W. G. Hingston, Mr. R. H. Isherwood, Mr. J. T. Reed, and Mr. G. J. Scaramanga.

The PRESIDENT announced with regret the deaths of The Rt. Hon. H. de Fellenberg Montgomery, elected in 1866, Mr. W. Fairbanks, elected in 1876, Mr. Reginald Hughes, elected in 1880, The Rt. Hon. Lord Cozens-Hardy, elected in 1891, Mr. Arthur Woods, elected in 1904, Major P. B. Lindsell, elected in 1913, and Mr. G. L. Mallory, elected in 1910.

The President also announced that the Mt. Everest Committee had decided that the question of the ascent of Mt. Everest could not be left as it was, and that they had agreed to make preparations for a further expedition in 1926. The question of ways and means

would be discussed by the Mt. Everest Committee at a later date.

Mr. A. D. GODLEY then read a Paper entitled 'Mountains and the Public.'

The President moved that a vote of thanks be accorded Mr. Godley for his delightful Paper. This was carried with acclamation, and the proceedings terminated.

END OF VOLUME XXXVI.

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(Signed) ARTHUR R. HINKS, Secretary, Royal Geographical Society.

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